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THE LYMPHATICS OF THE NOSE AND NASO-PHARYNX WITH CONSIDERATION OF THE GENERAL LYMPHATIC SYSTEM.*

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The embryology of the lymphatics, the origin and the function of the lymph fluid have been subjects of controversy for many years. A noted modern authority on the lymphatic system, P. Bartel, of Berlin, suggests that some of the problems cannot be solved by science—that they belong to the domain of philosophy.

HISTORICAL REVIEW:—Historically considered, it is clear that Hippocrates referred to the lymphatics when he wrote about "the glands containing white blood and the veins which take up nutrition and transport it to the glands." The founder of anatomy, Herophiles of Alexandria, understood and saw the chyle vessels. He speaks of the "vessels springing from the intestines and which terminate in small glands."

The proper conception of the lymphatics as a circulatory system was first formed by U. Rudbeck of Sweden, in the year 1659. As was the custom of that time, he made a public demonstration of the lymphatic circulation in animals which was witnessed by Queen Christina. W. Hunter, of England, supporting Rudbeck, wrote upon the origin and use of the absorbent lymphatic vessels; while Harvey to the end of his life refused to believe in the newly-found system of vessels, although he had only a few years before discovered the blood-circulation. It is of interest to record that one de'Peissic, of France, a high executioner of criminals, aided in the demonstration of human lymphatics. Prisoners sentenced to be

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hanged were carefully kept in ignorance of their impending fate, and about one and one-half hour before the time of execution were given a hearty meal which they relished with zest. Immediately after the execution their bodies were taken to the anatomical institute for investigation. The chyle vessels could be seen full of the recent food and their origin and distribution studied. The contents—a milk-white fluid—was collected for examination.

METHODS OF INJECTION:—Mascagni, of Italy, in 1789, for the first time traced the lymphatic tracts by means of mercurial injections. Besides this splendid anatomical research-work, he con-

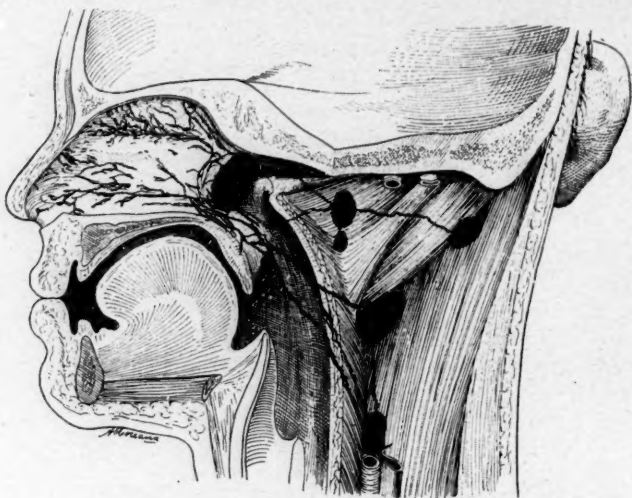


Figure 1.

See legend under figure 2.

tributed to the clinical side by the following: "When the diverse ganglionic groups are affected with diseases, and after having observed the origin of the lymphatic tracts which discharge themselves there, one sees clearly where the remedies ought to be applied in order to cure the illness with which they are affected." We are also indebted to the early French school, especially to Sappey, whose work on the anatomy and physiology of the lymphatics was classic and quoted and reproduced as late as the year 1900. He expresses himself thus: "In the human subject the lymphatic vessels of the nose allow themselves to be injected with great difficulty. It is only through research after research that we come to see them over the whole extent of the pituitary and to fol-

low them from their origin to their termination. In Sweden, Key and Retzius, and in Germany, Arnold, Henle, His, Virchow and Luschka added enormously to the physiology and anatomy of the lymphatics. Most important progress was made during the last ten years in the discovery of a new method of injecting the lymphatic tissue by Gerota in Berlin. Instead of the mercury he substituted a mixture of Prussian blue, ether and turpentine and replaced the syringe by an apparatus which slowly fills the lymphatic tracts by gravity. The new method came into use the world over, and through the labor of Most and Buchbinder, Kuttner and Bartel of



Figure 2.

The lymphatic and capillaries of the nasal fossae are tributary to the retro-lateral-pharyngeal glands and the deep superior cervical glands. The nasal lymphatics anastomose with those of the accessory sinuses.

Germany; Princeteau, Poirier, Cuneo and André of France and others, the topography of the lymphatics has been revealed in their finer ramifications throughout the body. The new method of tracing the lymphatics, and the advent of the new science of bacteriology stimulated investigators in the search for the avenues of infection.

GENERAL CONSIDERATION OF DISTRIBUTION AND LOCATION:—While my subject is limited to the lymphatics of the nose and nasopharynx, it is deemed best to first refer to the general system of lymphatics of which they are a part.

The lymphatic circulatory system is composed of (1) The canal system, which includes the thoracic duct with its branches, the lymph channels and the lymph capillaries; (2) the auxillary apparatus, consisting of the lymph glands and nodes, the four tonsils, the lymphoid tissue of the intestinal and ileocecal region, including Peyers' patches; and (3) the spleen, the thymus glands and medullary system of bones. The contents of the lymphatic system is chyle lymph plasma resembling blood plasma, lymphocytes and leucocytes. The fluids of the pleura, the cardia, the peritoneum, the cerebral and spinal spaces and other cavities of the body are

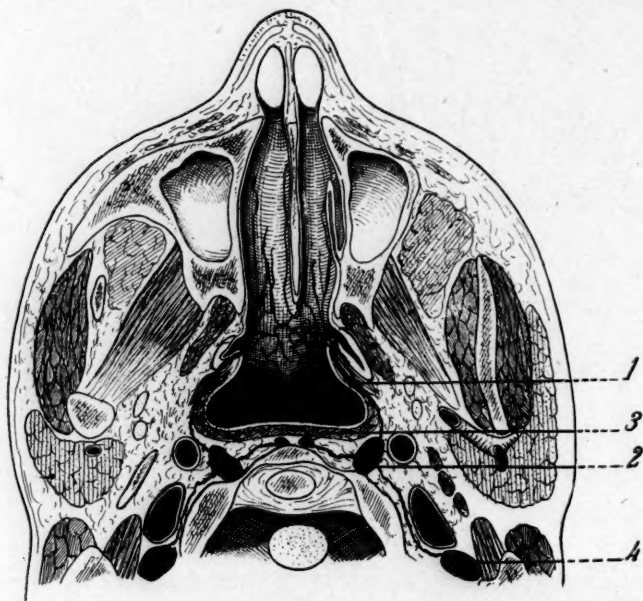


Figure 3.

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| 1. Sub-Eustachian tube lymph-gland. | 3. Retro-pharyngeal lymph-gland. |
| 2. Retro-lateral pharyngeal lymph-gland. | 4. Superior deep cervical gland. |

The peri-pharyngeal lymphoid ring is concentric in the same way as the lymphoid ring of Waldeyer, composed at this level of the Luschka-tonsil, the tube tonsil of Gerlach and the lymphoid accumulation situated on the posterior portion of the soft palate. Preparation by Andre of Paris.

of lymphatic origin. The lymphocytes and leucocytes for the purposes of defence and lubrication, according to Stohr, penetrate by diapedesis the epithelial layer of the respiratory tract, the alimentary

tract and the urinary tract. The lymphatic system and its contents represent in animals one-third of the entire body weight.

The lymphatics are characterized by the extraordinary richness in anastomoses. The smaller and larger vessels are variable in size and number and herein exhibit a low degree of differentiation. All the smaller lymphatic vessels before connecting with the venous system have interposed one or more lymphatic glands acting as filters. A further law may be found governing the circulatory function of the lymphatics, and that is the direction of the lymph stream,

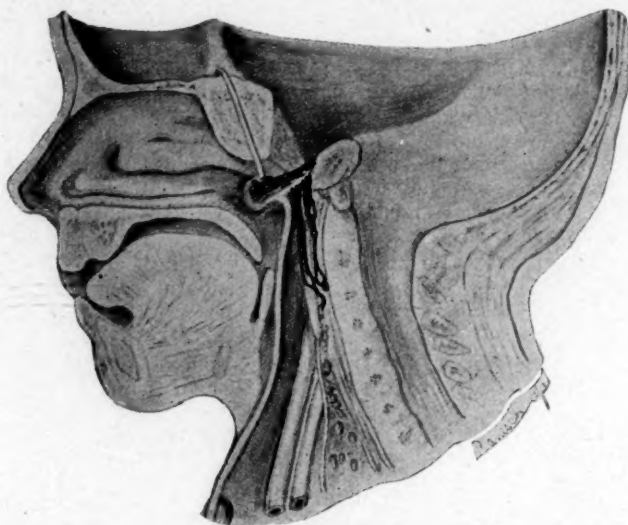


Figure 4.

Lymph channels of the Eustachian tube showing their termination in the lateral retro-pharyngeal glands and the deep cervical glands. They drain the tympanum and tympanic cavity and the mastoid region. Injected by Most in new-born infant.

which, owing to the valvular arrangement is always in one direction from the periphery to the center (centripetal). Of practical interest is the fact that the lymph system of one side of the body anastomoses with its opposite. Thus the lymph plasma of organs like the tongue, tonsils and breast is readily transported over the median line of the body to supply the opposite side. The lymph capillaries in their ramifications represent everywhere a closed system of organs and occasionally a cul de sac. Its situation in relation to the blood vessels is deeper, that is, more central. The

lymph glands are located in definite regions, in places of predilection and are related to certain territories of cutaneous surface or to certain organs. The gland or groups of glands so related are then called regional glands. The organ or territory which is connected with glands is termed tributary. A group of glands having a vas afferentia and vas efferentia is designated as a plexus of lymphatic glands. A regression of the structure of the lymphatic system is noted with age and may be regarded as physiological. In

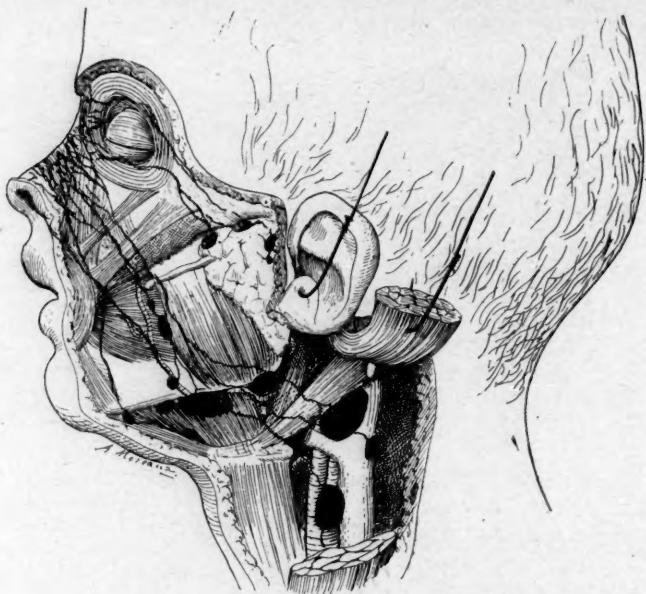


Figure 5.

The lymphatics of the external nose and the eyelids discharge in the parotid group, the buccal and the sub-maxillary group, terminating ultimately in the deep cervical glands.

early childhood the lymphatics are in full development. The network or reticulum, constituting the filtration-apparatus, is most complete at the early age of one year; the number of lymph glands in the child exceed that of the adult. Reproduction of lymph glands and regeneration after disease or removal has been proved by animal experiment and new lymph channels and capillaries have been found in recto-uterine adhesions.

The distribution of the lymph system in the body is as general as the blood-vesels, lymph vessels accompany the blood-vesels

everywhere, except in the placenta. In certain tissue, as epithelium (plate 1), cartilage and cornea, lymph vessels are absent. It is certain that wherever the blood-vessels are absent, no lymph channels can be demonstrated. In the central nervous system no lymphatics have thus far been found. The pulp of teeth was considered to be without lymphatics until recently when Schweitzer succeeded by the Gerota method in finding them there. There appears to be a definite rule that governs the distribution and location of the lymph system, just as a law governs the formation and distribution of the sanguinary system.

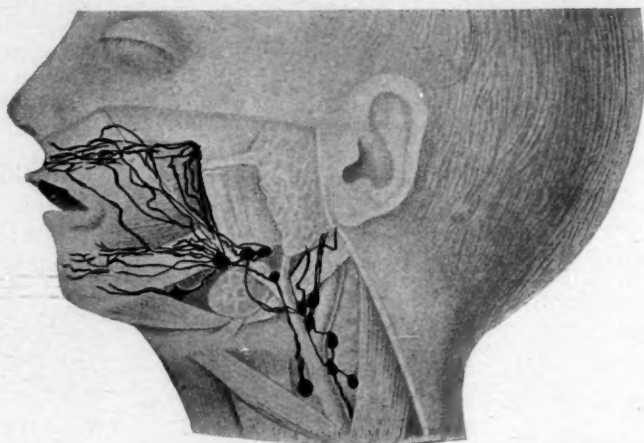


Figure 6.

Lymphatic vessels originating in the gums of the teeth. They terminate in the sub-maxillary group of glands and ultimately discharge their content. The deep cervical prepared by G. Schweitzer on prematurely born child.

The auxillary system is composed of simple lymph follicles placed in the submucosa, of groups of lymph follicles, of lymphatic nodes and glands, lymphatic channels in form of capillaries and larger vessels. The follicles and nodes are simple in construction as compared to the glands. The lymph glands placed in the pathway of the lymph channels constitute a filtration-apparatus which is comparable in function to the municipal filtration-system for the purifying of drinking water. The lymph gland is made up of a network, showing meshes and channels, labyrinthine in character, with numerous inlets, termed *vas afferentia*. The lymph fluid passes through this network of channels to ultimately unite and emerge

as one outlet, the vas efferentia. This network serves to retain corpuscular elements and foreign substances, and to a certain degree, bacteria. The number of lymph glands thus interposed tend to purify the passing lymph stream, and protect the blood stream from sudden and extensive invasion of germs. Aside from the mechanical filtration of the lymph stream there is a bio-chemic or lytic effect upon bacteria by the plasma, the lymphocytes and leucocytes, the combined effect of which is to reduce the virulency of germs. However, experiments have proved that under certain

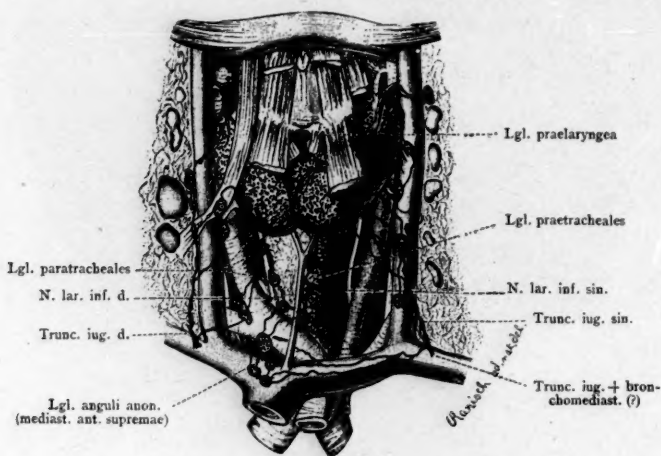


Figure 7.

The anterior deep cervical plexus of lymphatic glands, injected from the thyroid gland by F. Bartel of Berlin. Subject, an infant. This group of glands are regionary to the trachea, larynx, pharynx and the thyroid gland. Their channels are tributary to the supra-clavicular group and the thoracic duct. The recurrent nerves may become affected by pressure, in carcinoma of larynx and esophagus.

conditions, the invading germs may pass through the filtration system of glands without reaction on the part of the glands, and enter the venous circulation to product infection. It will be seen thus that the lymph system represents a capillary network which is tributary to glands or groups of glands connected with the larger lymph channels which ultimately connect by way of the thoracic duct with the pulmonary circulation. The larger channels are provided with valves, which under normal conditions, maintain a lymph circulation in the direction of least resistance. It has been demonstrated that the lymph fluid is richer in lymphocytes and leucocytes after

its passage through the glands, giving rise to the conjecture that these important cells have their birth within the gland. To test this function, the vas afferentia, the inlet of a gland, was ligated excluding the lymph fluid and it was found that no lymphocytes were in the gland, although its blood supply, through which they might have entered, was not interfered with. It is reasoned from

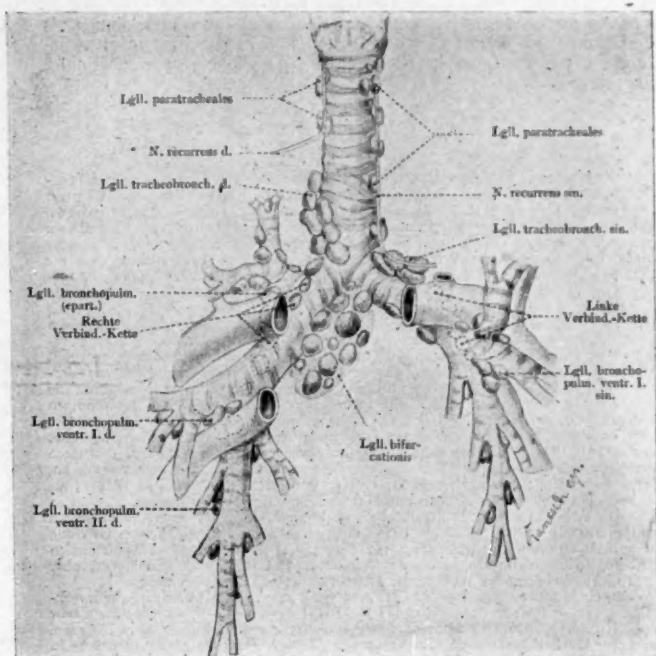


Figure 8.

Para-tracheal and bronchial lymphatic glands, regional to the lungs, Bronchi, trachea and diaphragm become tributary to the supra-clavicular group of glands (the indirect route) and through the tuncus broncho-mediastinalis into the sub-clavian vein and the thoracic duct.

this experiment that the nutrient lymph fluid carried the substance that provoked a physiological stimulus to the gland, to which it responded by the formation of leucocytes. It has been observed in experimental work upon the alimentary lymph tract that the leucocytes rather than the lymph plasma are carriers of foreign substance including germs. After gaining entrance, the foreign bodies are enveloped by the leucocytes, conveying them to the near-

est lymph gland, where they may be retained for a longer or shorter period, finally reaching the thoracic duct, which empties into the general circulation. Here they may then be sifted out by the capillaries of the lungs, the kidneys, the meninges or bones to produce lesions. Thus an infection of the general blood stream finds entry usually through the lymphatics and venous systems, often giving rise to diseases of the viscera.

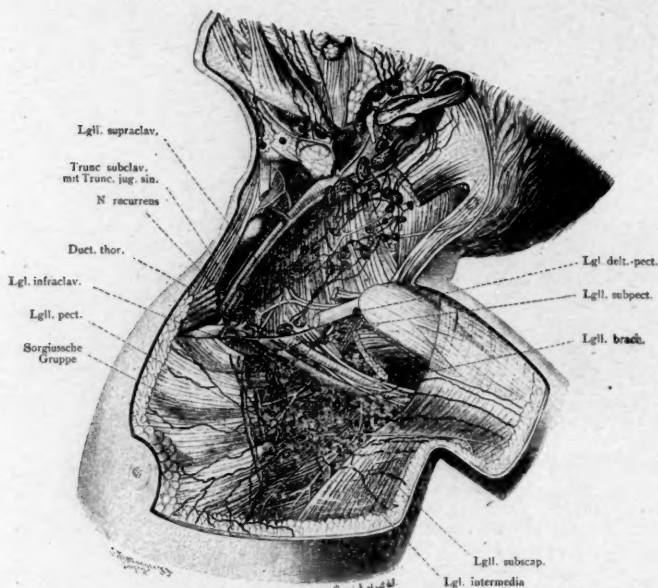


Figure 9.

Lymphatic glands and channels of the face, neck and maxillary region. Through the supra-clavicular group the entire lymph of the head and neck passes into the venous circulation. A direct connection between the glands of the neck and thorax has not been demonstrated.

The lymphatics of the lungs and thorax are less developed than those of the pharynx and intestines. The construction is simpler, the leucocytes are less in number and the lymph circulation is also less active. Compared with the pharynx and intestines, the lymphatics of the lungs are less efficient in their defence-function. No direct anastomoses exists between the lymphatics of the thorax and those of the head and throat, nor between those of the thorax and abdomen. Attempts to inject a direct route have failed in

animals and upon the cadaver. However, an indirect route exists between both. The supra-clavicular chain of glands forms an indirect connection between the neck and chest. It is held that infection can only be carried from the neck to the thorax by this indirect route when a suppurating gland causes a reversal of the lymph current forcing the infectious material through this indirect route, or the suppuration of a gland may produce erosion of pleura or thoracic duct to produce general infection of the viscera. Direct connection of lymphatic channel between the pleura and lungs and bronchial glands with the abdominal cavity is unknown, only the lymphatic vessels of the diaphragm anastomoses with the pleural



Figure 16.

See legend under figure 11.

and the peritoneal surfaces, which, according to Kuttner, form the only lymphatic connection between the thorax and abdominal cavity. It is of interest here to state that the lymphatics of the inguinal region are deficient in number and in anastomosis, and that the enucleation of too many glands may be followed by temporary elephantiasis of the lower extremities.

THE NASAL FOSSAE AND THEIR RELATED GLANDS.—The nasal mucosa contains numerous lymphatic capillaries, situated in the beds of the chorion immediately under the epithelium. According to the law of Teichman, applying to the lymphatic system in general, their development is scant and slender where the mucosa is thin and stretched, as in the septum and superior turbinate and ethmoid

region, but where the mucosa reaches its maximum thickness as, for example, in the floor of the nose and in the turbinate regions, they are rich and voluminous. In the turbinate the capillaries form a network of unequal meshes, of irregular size vessels. This network of capillaries anastomoses over the entire nasal mucosa and form a perfectly closed system of vessels, just as the sanguinary system, which they accompany. However, two somewhat independent territories are found, the first territory belongs to the olfactory region, the second to the respiratory portion of the nose, both having distinct collectors. The collectors unite in an anterior and posterior trunk. The anterior trunk anastomoses with the vessels of the external nose and becomes tributary ultimately to the sub-

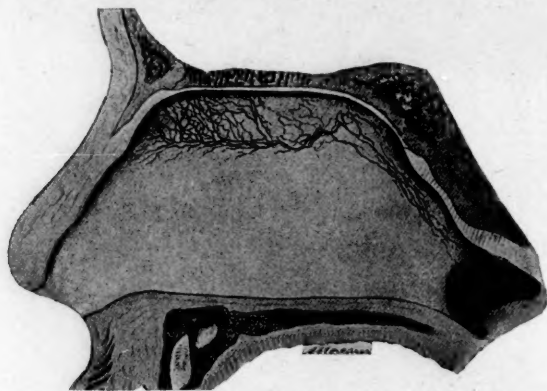


Figure 11.

The naso-meningeal route in man. By sub-arachnoid injection in four infants, Andre of Paris, demonstrated the existence of two independent routes—the first through the cribriform plate of the ethmoid bone, the second through the sheath of the olfactory nerve, both connecting with the sensorial nasal mucous membrane. 1. Injected lymphatic channel. 2. Injected blood-vessels.

maxillary gland and deep cervical gland. The posterior trunk, the most important lymph tract of the nasal fossae, is divided into two pedicles which unite on the side of the pharynx directly behind the hard palate and just below the orifice of the Eustachian tube, where there exists a true meeting-place of the lymphatics of the nasal fossae and the sinuses, (plate 2). Some lymphatics penetrate into the Eustachian tube for varying distances, while others turn about the superior pole of the orifice, sometimes meeting an interruptor nodule, known as the sub-tubal nodule, situated under the Eustachian tube. Thus, a very rich peri-tubular network is found sur-

rounding the Eustachian tube, which makes the unskillful introduction of a catheter somewhat dangerous. The lymphatic tract is continued in two directions—three or four vessels take an outward and downward course to terminate in the deep superior cervical gland, while two to four vessels take the direction on the side of the pharynx to become tributary to the lateral retro-pharyngeal



Figure 12.

Naso-meningeal route in a rabbit, by Andre of Paris, showing: a, Superficial lymphatic vessels; b, deep lymphatic vessels; c, sheath of the olfactory nerve; d, olfactory nerve; e, epithelium; f, blood-vessels.

gland, which in turn anastomoses with the deeper superior cervical gland.

The circulation of the lymph in the nasal cavity is in two directions, partly towards the external nose, terminating in the glands of the face and partly in a posterior direction toward the pharyngeal ganglions. To summarize, the efferent vessels from the nasal

fossae are tributary to the submaxillary retro-lateral pharyngeal glands and deep cervical gland. They likewise anastomose with the superficial cervical, the buccal and parotid glands.

THE EXTERNAL NOSE AND RELATED GLANDS.—The lymphatic capillaries emanating from the cutaneous portion of the external nose, the eyelids, the vestibule of the nose, the network of which is very loose, and from the periosteum and perichondrium may be divided into three groups: the superior, middle, and inferior. The

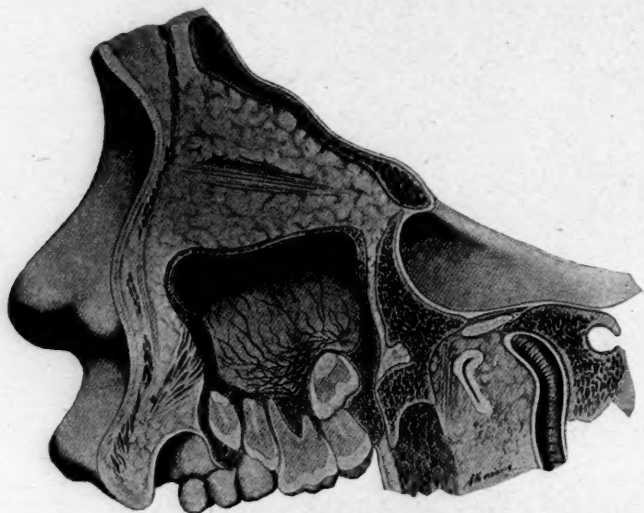


Figure 13.

Lymphatics of the maxillary sinus of a child in the second stage of dentition—by Andre of Par's. The lymphatic channels pass through the orifice of the antrum and terminate in the nasal fossae anastomosing these with the nasal lymphatics. It is believed that these channels perforate the facial skeleton to unite with the lymph-vessels of the face.

middle is the important tract, the others being only accessory, consisting of from three to five vessels, which after free anastomosis with the inferior and superior tracts, terminate in the sub-maxillary and parotid glands. The inferior and superior groups of capillaries arise at the root of the nose and eyelids and both terminate in the parotid glands, which in turn anastomose with the deep superior cervical gland. The lymphatics of the nasal mucosa anastomose with those of the external nose. The lymphatic collectors, which regularly belong to the sub-maxillary glands, anastomose with the buccal group, situated in the superficial region of the cheeks, which

the German anatomists have termed a 'Shaltdruese' or interruptor nodule, (plates 4 and 6). These glands are frequently the seat of disease. Recent statistics show 87 cases of disease of the buccal glands—in 32 subjects it was a chronic tuberculosis; in 4 cases, acute suppuration, supposedly infected from tonsils; 11 cases of carcinoma, originating in the nose; and 12 times diseases from caries of the teeth. Injection was carried along the three tracts and arrested by the buccal group of glands.

THE PHARYNX AND RELATED GLANDS.—The mucosa of the pharynx is very richly supplied with a capillary net work of lymphatics, especially in the region of the lymphoid ring. The efferent lymph vessels leave the pharynx in three places, viz., in the region of the sinus pyriformis, in the posterior part of the wall of the pharynx and laterally near the tonsils. 1. The capillaries of the laryngeal part of the pharynx unite to form collectors, which penetrate the mucosa near the sinus pyriformis and anastomosing with the lymphatics of the larynx become tributary to the deep superior cervical glands. They perforate the hyoid membrane and occasionally anastomose with the infra-hyoid gland. 2. The posterior efferent lymph vessels arise from the dome of the pharynx, the posterior and lateral part of the upper pharynx in the region of the Eustachian tube and find exit at two points, first through the muscular wall of the pharynx in the median line penetrating the bucco-pharyngeal fascia, to terminate by an abrupt turn, by direct and indirect route into the retro-pharyngeal glands, both median and lateral, which anastomose with the superior deep cervical group of glands. 3. The lateral efferent lymph tract is supplied by the pillars and tonsils which are tributary to the superior deep cervical glands and occasionally anastomosis is found with glands of the trachea.

TONSILS AND RELATED GLANDS.—The lymph vessels of the tonsils, three to five in number, penetrate laterally the peri-tonsillar tissue, the buccal pharyngeal fascia and the superior pharyngeal constrictor muscle and accompanying the jugular (internal) vein reach the deep superior cervical gland (plates 5 and 6). One or more lymphatic vessels from the tonsil take the direction anterior and sometimes posterior to the internal jugular vein to empty into one or two glands located under the posterior belly of the digastric muscle and covered by the sterno-cleido-mastoid muscle. These two glands located near the digastric muscle connect with the deep cervical glands. In fact, the lymphatics of the nose and pharynx, as also those of the tonsillar ring, the teeth, the mouth, all anastomose with each other. The median line forms no border, the two sides are connected by anastomoses. All the lymphatic glands of

the head and face become united with the superficial and deep glands of the neck. Of these glands there are altogether probably two hundred in number. While the glands exist in definite groups and are related to organs or territories, they eventually become tributary to the supra-clavicular glands which empty into the venous circulation.

THE NASO-PHARYNX AND ITS RELATION WITH TONSILS.—The intimate lymphatic relation of nose and tonsils was proven by the very interesting experiments of von Lenhardt, of Budapest. He injected eighteen dogs with China red in the nasal mucosa of the turbinate bodies to determine the direction of the lymph stream in vivo and to trace the lymphatic connection with the tonsils. The dogs were chloroformed and killed from two to seven days after the injection when an examination was made of the parts, the red inert matter aiding to find the lymphatic tracts. His conclusions were that lymphatic channels connect the nasal mucosa directly with the tonsils; that the lymph stream in vivo is in the direction towards the tonsils—his experiments corroborating the assumption on clinical grounds by B. Fraenkel, that the tonsillitis secondary to operation upon the turbinate bodies is conveyed by the lymphatic connection and that the infection is not by continuity of tissue nor by way of the blood. Further, that an infection of one side of the nose may be carried to the tonsil of the opposite side. Von Lenhardt found the colored substances within the body of the leucocytes mostly in the deeper portion of the tonsils. The microscopic pictures revealed that the leucocytes were migrating towards the surface of the tonsils. These experiments would lead to the assumption that the tonsils are frequently infected secondarily in acute infection of the nose and the accessory cavities and the nasopharynx. The lymphatic connections between the tonsils and nasopharynx are sufficiently intimate to constitute the tonsils as related glands. Just as an otitis media may originate from an infected nasopharynx by way of the lymph channels, or, which is more rare, a meningitis through the lymphatics of the cribriform plate or the sheath of the olfactory nerve, so may the tonsil be infected by way of the lymphatic channels. It is probable that every inflammation of the mucosa induces a swelling often imperceptible, of the neighboring lymphatic glands of greater or less extent, which, acting as a protective mechanism inhibits the development of the germ. To the tonsils, which have the function of an open lymphatic gland, may be ascribed a protecting influence against the micro-organism which are ever present in the mouth and nasopharynx, acting also as a barrier against their invasion into the trachea and esophagus.

On the other hand it must be admitted that the tonsils are frequently the seat of primary inflammation and that it is more susceptible to disease than other membranous structures in this region.

NASO-MENINGEAL ROUTE.—By the sub-arachnoid injection in four human subjects of an age varying from one to four months, André was able to inject the nasal meningeal lymphatic tract, as proven by histological examination.

It was shown that the lymphatics of the perimeningeal spaces and the lymphatics of the nasal fossae connect by means of little canals crossing the ethmoidal cribriform plate, (plate 10). The territory injected seems to belong entirely to the olfactory field, that is, the sensorial mucous membrane. There also appears to be a very marked, if not absolute, independency between the system of the perineural sheath lymphatics and the lymphatic network of the nasal fossae, communication between these being obtained only through excessive pressure of the syringe, (plate 12). These nasomeningeal connections might, then, be regarded as homologous with the communications which exist between the peri-ocular and labyrinthine spaces. Thus an infection may travel through the lymphatic channels from the nose or naso-pharynx to the meninges and produce a purulent meningitis of pneumococcus of influenza meningitis. The germs of cerebro-spinal meningitis or polio-myelitis may be transferred through the cribriform plate or through the sheath of the olfactory nerve.

SINUSES.—The lymph capillaries of the maxillary sinus are richest in net work on the floor of the antrum; they terminate with those of the nasal fossae, passing through the orifice of the antrum and through the thin plate of the posterior nasal fontanel. When forcible injections were used the little clusters of lymphatics were injected, supplying the periosteum, and André has seen very fine network penetrate the periosteum and thin plate of bone, becoming visible at its opposite face. By injecting the posterior wall of the maxillary sinus (plate 13), André has seen several lymphatic channels lose themselves in tissue where it was impossible to follow them. André is making experiments to discover if there exists lymph communication, as certain authors think, between the ethmoid cavity and the orbital cavity. The ethmoid cavity contains extremely fine meshes of capillaries, visible only with the magnifying glass. Clinically it is fair to assume that infection of the sinuses may be by way of the lymphatic capillaries transferred to the orbital cavities and thus reaching the meninges. Most believes that the lymphatic channels of the sinuses (especially from the maxil-

lary sinus) perforate through the facial skeleton to unite with the lymphatics of the external cutaneous surface which discharge into the sub-maxillary glands.

SUMMARY.—To summarize: 1. The lymphatics of the external nose are tributary to the parotid group of glands, the buccal, the sub-maxillary and the deep cervical. 2. The lymphatics of the nasal fossae discharge themselves in the lateral retro-pharyngeal glands and into the deep cervical glands situated under the base of the skull in the region of the middle of the neck. The regionary lymphatics of the pharynx and tonsils are the medium and lateral retro-pharyngeal group and finally the deep superior cervical, which occasionally anastomose with the lingual and peri-tracheal.

When we consider the lymphatics of the naso-pharynx, we note the following: 1. The richness of the network of lymphatic capillaries and the frequency of the anastomosis everywhere and over the median line connecting both right and left sides of the nose and throat.

2. The fact that the lymphatic system of the nose and throat does not constitute an entire independency; on the contrary, it is joined with the surrounding lymphatics—those of the forehead, the cheek, the eyelid, the upper lip, the external ear, on one side and with those of the Eustachian tube and soft palate, the pharynx, the sinuses, and the peri-meningeal spaces on the other side. Thus the regionary glands belong equally to the neighboring territories. This also is true of the lymphatics of the larynx, thyroid and tracheal bronchial glands. They become tributary to the anterior cervical plexus, which ultimately anastomoses with inferior cervical glands that discharge into the veins the entire lymph collection of the head, neck and upper breast.

3. The lymphatics of the tongue, lips, palate, teeth and floor of the mouth all have intimate connection and discharge into the regional glands, which are the sub-mental sub-maxillary and the infra-auricular—the posterior part of the mouth joins the lymphatics of the tonsils and all become tributary to the deep cervical situated along the jugular vein.

4. What interests the clinician and surgeon, especially for purposes of diagnosis, are the location of the glands, the places of predilection and the organs which are tributary to them, or to which they are related. Frequently the infection passes through the lymphatic tract unperceived and becomes a concealed infection, producing adenitis which manifests itself by symptoms of pressure such as dysphagia—where the retro-pharyngeal groups and the sub-

Eustachian gland is involved,—by trismus when the buccal glands of the cheek are infected; and by torticollis when the deep cervical group under the sterno-cleido-mastoid muscle are inflamed. The recurrent nerve, if pressed upon by an inflamed tracheal gland, may induce aphonia as in cases of carcinoma of the esophagus or larynx.

The tonsils, while frequently the seat of primary infection, may become infected secondarily in acute infectious diseases of the neighboring organs, through the lymphatic channels. The same may be true in syphilis and in operative procedure in the nose, especially when tampons are used.

The lymphatic tracts play a more important rôle as carriers of infection than is assigned to them. Through the intimate anastomoses of the lymph channels the infectious material is spread more often than by contiguity or by way of the sanguinary system.

The lymphatic system supplies the material for repair, removes waste, and by mechanical filtration and by phagocytic and lytic action of its lymph constitutes a defence function.

The regression of the lymphatic system with age, permits the conclusion that a maximum of danger is offered to the child, because of its ready permeability by infectious matter, its richness of network and frequent anastomoses, as compared to the adult; hence the earliest treatment of the affected region of the mouth, nose and throat are indicated.

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THE LYMPHATIC APPARATUS OF THE NOSE AND NASOPHARYNX IN ITS RELATIONS TO THE REST OF THE BODY.*

BY DR. CAMILLO POLI, GENOA.

The lymph which flows off from the region of the nose and the naso-pharynx empties more or less directly into the pericervical glandular ring, since it reaches the group of the parotid and sub-maxillary lymphatic glands at the front, and the retro-pharyngeal glands at the rear. From these first stations the lymph flows into the vertically-lying chain of glands of the neck, and from these it reaches the venous system. At their source and during their course the lymph-tracts of the nose and the naso-pharynx come into more or less close relations with the lymphatic territory of neighboring organs, either through anastomosis at their source or through efferent lymphatic vessels which carry the lymph to the glands and which in their course unite with other lymphatic vessels coming from neighboring organs.

It is the purpose of my paper to set forth, on the basis of now existing substantiated data, the structure and anatomical arrangement of the lymphatic apparatus of the nose and nasopharynx, emphasizing in particular its relation to the rest of the body.

In the absence of personal investigations, I have, in addition to that information for which we are indebted to classical anatomy, made use of the results of those investigations which have been undertaken on the cadaver and *in vivo*, to throw light on the subject of these anatomical relations with especial reference to the needs of clinical practice.

In the description of the nose and the naso-pharynx these points are to be considered separately; the radicular region, the efferent lymphatic tracts, and the glandular region.

The Lymphatic Mesh of the Radicular Region: Here there is a difference depending upon whether one considers the skin of the external nose, the mucous membrane of the internal nose, the accessory nasal cavities and the naso-pharynx.

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(a) The lymphatic net of the external nose: The lymphatic net of the skin is very wide-meshed on the ala nasi, is more closely woven at the base of the nose, and is meshed finest at the anterior nares and the tip of the nose. The lymphatic vessels which compose this network have, according to Sappey, two principal origins, on the one hand the cutaneous papillae, on the other hand the sebaceous glands. They are of greater circumference where the papillae (or the sebaceous glands) are farther developed, and less extensive where the papillae are reduced to a lesser circumference. Other less numerous and less important lymphatic vessels originate in the muscles, the periosteum, and the perichondrium of the region in question. The latter in particular are very minute. (Andre.) In this way two lymphatic reticula are formed, a superficial and a deep-lying one. The former gradually gathers to form small lymphatic vessels which at first take their course through the superficial layers of fat, and then make their way inward, finally reaching the same glands as do the better developed lymphatic vessels of the deeper lying reticulum. (Kuettner and Most.) The lymphatic reticulum of the skin of the nose communicates, aside from its connections with its immediate vicinity, at the median with the reticulum of the opposite side and is continued in the lymphatic reticulum of the mucous membrane by means of lymphatic vessels which surround the outer edge of the nostrils or perforate the interstices of connective tissue in the osseous or cartilaginous framework of the nose. (Mosher.)

(b) The lymphatic reticulum of the nasal cavity: The lymphatic tissue of the nasal cavity, situated in the chorion of the mucous membrane directly beneath the basement-membrane of the epithelium, there where the adenoid tissue is located (Poli)—more superficially than the network of the blood capillaries—forms a completely isolated system with horizontally-placed meshes. As far as the greater or lesser prevalence of lymphatic vessels is concerned, Teichmann's statement also on the whole proves true here, the number and development of the vessels is in proportion to the solidity and thickness of the mucous membrane. The lymphatic net is therefore best developed along the free edge of the middle and lower muscle. At the posterior portion of the latter the network is most extensive. It is thinnest in the upper portion of the nostrils, i. e., in the region of the upper muscle, the olfactory region and on the entire septum.

According to Andre the network of lymphatic vessels in the nostrils is composed of two territories which to a certain extent are independent of each other. According to his statement the one territory takes in the olfactory region (*regio olfactoria*), which includes the upper third or fourth of the septum and of the lateral nasal wall; the other the respiratory region (*regio respiratoria*). Aside from a difference in the character of the meshes which compose them, the two reticula are distinguished from each other by the presence of collective vessels which come to each of them separately, at least at their beginnings. This division is most easily recognized on the septum where the lymphatic region of the olfactory portion is composed of numerous little canals with frequent anastomosis which descend from the roof of the nose in a vertical direction and at the height of the upper fourth of the septum unite in from two to three horizontally-running collective canals; these travel back towards the posterior edge of the septum where they divide into two arms, one of which is directed outward towards the cushion of the buccal orifice of the Eustachian tubes, the other downwards towards the floor of the nose.

In their whole course the horizontally-running collective vessels take up a very small quantity of lymphatic vessels from the respiratory region of the mucous membrane of the septum, which lies farther down. The lymphatic region of the latter—the *pars respiratoria*—which consists of a net of irregular horizontally placed meshes flows towards the back in small vessels which run horizontally not far from the floor of the nose and at last join themselves to the vessels which come from the lower branch of the tracts which have their origin in the *pars olfactoria*.

The comparative independence of the two regions is also said to become apparent, according to Andre, by the fact that it is difficult, if not impossible, to inject both net-works simultaneously, and that, as we shall see, the net which is brought out by direct injection into the upper division of the septum is absolutely identical with the one which is obtained by sub-meningeal injection.

The lymphatic regions of the two nostrils communicate with each other by means of anastomatic branches which at the back surround the free edge of the septum and at the front, though in a less pronounced degree, by means of vessels which gain ac-

cess through the septal cartilage. As has already been stated, the lymphatic net of the mucous membrane gives place in front to that of the outer skin and at the rear to that of the nasopharynx.

(c) The lymphatic net of the nasal accessory cavities: In the lymphatic region of the nasal cavities, the lymphatic tracts which have their origin in the nasal accessory cavities flow together. Most stated this as a probability, not only in view of the history of the development of these accessory cavities which, as is well known, are produced by a protrusion of the nasal epithelium, but also because of the similarity with the behavior of the circulation of the blood as proven by Zuckerkandl; it finds its confirmation in the observations of Andre which we will here briefly repeat.

The lymphatic reticulum of the antrum of Highmore, the behavior of which was studied on the cadavers of two children, 5 and 8 years of age, is composed of a system of small canals which form large and irregular meshes, and which converge towards the ostium maxillare like the spokes of a wheel. The lymphatic vessels surround the free edge of the ostium to then unite with those of the central nasal duct. Here they group themselves into from four to six large canals, which, frequently anastomizing with each other, take their course from the front to the back and at last reach the ridge which divides the inferior muscle from the anterior cushion of the Eustachian tube. Besides passing through the ostium maxillare the collecting vessels also traverse the posterior fontanelle of the nasal wall of the sinus. In a few places distinct islands of lymphatic vessels, which have their origin in the periostium, are seen beneath the mucous membrane.

According to Sieur and Jacob, the lymphatic tracts of the antrum of Highmore are said to communicate with those of the orbit. But this is not confirmed by the investigations of Andre and those of Gruenwald. It must be mentioned that in the case investigated by the last-named author, a dehiscence in the lamina papyracea was present, through which communication between the nasal and the orbital lymphatic reticula would certainly have been made even easier. On the roof the antrum of Highmore Andre saw three or four vessels which lost themselves in the surrounding tissues but he was not able to follow them in their further course. Neither Andre nor Gruenwald

succeeded in demonstrating the presence of lymphatic emissaria on the floor of the antrum of Highmore along the alveolar border but Andre is not inclined to exclude absolutely the possibility of their presence.

In the cells of the ethmoid bone, an extremely fine lymphatic net is said to be found whose vessels communicate with each other by means of small canaliculi which perforate the cell-walls. But according to Gruenwald the existence of such canaliculi perforating the cell-walls cannot be demonstrated with certainty.

As concerns the frontal and sphenoidal sinuses, it may be assumed, although the proof is still lacking, that in them, too, a lymphatic net-work is present which connects with that of the nose. The difficulty in establishing such proof consists, as Most points out, in the fact that the accessory cavities are hardly developed in the newly-born, where such proof might be found, and that in adults the mucous membrane lining is very thin and is fitted to the rounding form of the cavity walls, offering very unfavorable conditions for the demonstration of this lymphatic net.

A continuous connection exists between the intra-cranial lymphatic region and the epidural lymph spaces of the cranial cavity. This fact which was first announced by Schwalbe and Michel, has been proven by Axel Key and Rezius to be true in the case of dogs and rabbits. This communication is said to be established by means of fine canaliculi which pass singly through the lamina cribosa and are quite independent of the olfactorius sheaths. According to the above-named authors the lymphatic network of vessels empties on the free surface of the mucous membrane in the shape of canaliculi which penetrate the cells of the epithelium and there terminate in crater-shaped expansions. Such an arrangement would justify the assumption that the peri-meningeal (sub-arachnoid and epidural) lymph spaces communicate directly with the outer world.

Zuckerkindl again took up the investigation on animals. He confirmed the existence of connection between the peri-meningeal spaces and the nasal lymphatic tracts, but he expressed doubt as to whether it was not perhaps a question of laceration of the pia mater and extravasion with subsequent filling of the lymph space. However, the investigations which Cuneo and Andre made, not only on animals but also on human beings

(four children whose ages ranged from one to five months) confirmed the conclusion of Key and Retzius; Cuneo and Andre also showed that communication was established through tracts which were quite independent of the nerve sheaths, but they denied that the lymphatic net injected in this way communicated with the outer world. The lymphatic character of this nasal net-work was proved, aside from histological investigations, by the fact that it could be demonstrated quite independently of the blood-net, and more especially by the fact that its injection by means of a direct puncture in the olfactory region gave exactly the same net as did the peri-meningeal injection. (Andre.)

More recently, Falconi has proved the presence in the dog of lymphatic communication between the peri-meningeal spaces and the mucous membrane of the frontal cavities. According to this author, the injection from the peri-meningeal spaces fills the lymphatic reticulum directly and fills it through its own connecting channels, not by way of the endo-nasal net and the channels which traverse the lamina cribrosa, which Key and Retzius pointed out, but through transostia emissaria which could be demonstrated in the substance of the bone of the anterior wall of the frontal cavities.

(d) The lymphatic net of the naso-pharynx. We have seen that the lymphatic net of the nasal cavities is continued towards the back without interruption in the mucous membrane of the naso-pharynx. On the roof of the pharynx and especially in the region of the pharyngeal tonsil the lymphatic vessels have their cul-de-sac-like beginnings in the layer of tissue which borders the lacuna. They lie in the form of a ring-shaped net about the follicle and in the follicular tissue. Here too, according to Suchanek, under peculiar conditions connection is said to exist between the lymphatic vessels and the peri-meningeal lymph spaces. From the floor of the nose, the lymphatic net-work is continued in a plexus which is found on the posterior surface of the soft palate.

The lymphatic net of the lateral walls of the naso-pharyngeal cavity is very rich in the region of the buccal opening of the Eustachian tubes; here the lymphatic tracts of the Eustachian tube converge—on their part they are connected with those of the tympanic cavity.

From what has just been said it follows that: the lymphatic apparatus of the exterior nose, of the nasal cavities and of the naso-pharynx is made up of a single net whose various parts are more or less directly connected with each other. The most important com-

munications which this net establishes with the neighboring organs are those which exist between the endo-nasal system of lymph vessels and the peri-meningeal lymph spaces on the one hand and between the lymphatic capillaries of the naso-pharynx and the middle-ear on the other hand.

The Lymphatic Tracts and the Glandular Region:—The lymphatic flow of the nose and the naso-pharynx reaches the proper regionary glands in part by flowing forwards towards the cheek to the parotic and submaxillary glands, in part by flowing towards the back to the pharynx, divided into two branches; one of these branches is directed up and back to the retro-pharyngeal glands while the other flows downward and outward to the deep cervical glands.

The Antero-Exterior Lymph Stream:—The lymph of the external nose and of the anterior portion of the nasal cavities joins the lymph stream which flows forwards and outwards by means of small canaliculi which surround the free edges of the nostrils or traverse the connective tissue fissures in the several parts of the osseous and cartilaginous framework of the nose.

An upper group is formed (Kuettner) from two or three branches which come from the root of the nose and the inner corner of the eye and which flow subcutaneously until they reach the upper pole of the parotic gland. Continuing in the same stratum of tissue, they reach the inferior pole of the gland and pass through two or three lymphatic glands, situated in the parotis, to at last empty into the so-called superficial cervical glands. A lateral branch or, it may be, an independent vessel usually penetrates through the superior pole of the parotis into the substance of the gland itself where there are often a few small lymph nodules.

A second group (Kuettner and Most) is made up of two superficial and one deep-lying vessel which come from the superficial (the latter from the deep-lying) lymphatic net-work of the root of the nose and of the upper portion of the lateral parts of the nose, run along the inferior margin of the orbit, and travel in an almost horizontal direction until they reach the parotis. Here they turn downwards and terminate in the lymphatic glands lying near the inferior pole of the parotis, (superficial cervical glands).

The third group which is considered the most important by the several authors is made up of from six to ten vessels whose origin is in the deep and the superficial parts of the nose from its root to its tip. The lymphatic vessels which come from the lateral parts of the nose generally follow the course of the vena facialis, but the

vessels which come from the tip of the nose, the ala nasi, and the membranous septum accompany the external maxillary artery. From these various points of exit the efferent canals reach the sub-maxillary glands, some of them having first traversed the facial lymphatic glands.

The facial lymphatic glands which were even described by Morgagni but were then forgotten by the anatomists, were again investigated by the clinicians (Poncet, Albertin and Vigier, Jaboulay and especially by Princeteau, Buchbinder, Kuettner and Trendel). These glands which in number, position, and occurrence are variable and inconstant and have therefore the character of "intercalary glands" (Most) may be divided into three groups. They are arranged in "stories," one above the other, along the course of the facial vessels and are subcutaneous. One group, the maxillary glands (Buchbinder), or supra-maxillary glands (Trendel) is made up of two or three small glands and is situated along the outer surface of the inferior maxillary. The second group (the buccinator group, Most) has two sub-divisions, an anterior (ganglia commisural, Princeteau) and a posterior one near the passage of the parotid duct; and finally there is an upper group (the superior maxillary group of Most) which is formed of the ganglion of the naso-labial sulci, a sub-orbital ganglion, and a molar ganglion whose existence, however, has only been clinically proved.

A last group of efferent lymphatic channels, is, according to André, composed of vessels which, coming from the tip of the nose and from the nostrils, flow downwards very near the surface and, surrounding the labial commissure, terminate under the chin in the small sub-mental glands of the same side or of both sides through anastomatic branches. But it must be remarked that neither Kuettner nor Most succeeded in injecting these glands from the nasal tracts. If we summarize, we may characterize as definite that as regionary glands of the lymphatic tracts which come from the external nose and the anterior portion of the nasal cavities, the parotid and the superficial cervical glands are to be considered as the trunks for the first (Kuettner) and second groups of efferent branches, the sub-maxillary lymphatic glands and—as an intermediate station—the facial lymphatic glands for the third, and the sub-mental glands for the fourth group. Such a division has, however, no absolute worth in as much as it is not unusual, as Kuettner remarks, for efferent trunks of one group to cross those of another and unite. Thus, for example, he found in one case that a vessel of the third group, passing diagonally across the face, terminated in a

parotid lymphatic gland and in another case, that a vessel of the second group reached the sub-maxillary gland.

At these first stages the lymphatic stream which comes from the nose unites with that from other sources, particularly with that from the skin of the frontal region and the eyelids (the parotic lymphatic gland), from the cheeks, the lips, the gums, and the anterior third of the lingual margin (the submaxillary lymphatic glands). From these intermediate stations the lymph gradually arrives at the chain of deep cervical glands and especially the ganglion situated near to the internal jugular vein in direct proximity to the thyro-facial trunk (Most's Hauptdruese, the ganglion sousdigastrique of André).

The Postero-Interior Lymphatic Stream:—The posterior lymphatic stream of the nasal cavities receives the greater part of the lymph from this region through collective canals which have their origin at the point where the nose merges with the naso-pharynx, i. e., directly in front of the mouth of the Eustachian tube in the raphe between it and the posterior end of the inferior muscle. From this point the stream arrives at the regionary lymphatic glands by means of collective canals which flow in two different directions, namely on the one side upwards to the posterior wall of the naso-pharynx, on the other side directly downward and outwards to the deep cervical glands. Therefore, with Most we can distinguish two groups of collective canals, a postero-superior and an antero-inferior.

The postero-superior trunk is composed of from two to four branches which, penetrating below the Eustachian tube, between the two peri-staphyline muscles (where furthermore one or two intercalary glands are occasionally to be found) follow the lateral wall of the pharynx. Here they lie along the superior constrictor muscle and unite with the lymphatic trunks which come from the naso-pharynx. When they arrive at the angle formed by the roof of the pharynx and its posterior wall, some of these trunks penetrate the musculature of the upper part of the pharynx and the fascia at the height of the massae laterales of the atlas, and reach the lateral retro-pharyngeal glands. Others, on the contrary, and especially those that come from the roof and lateral walls of the pharynx, continue as far as the median where they break through the layers of tissue of the pharynx, then turn outward and reach the lateral retro-pharyngeal glands after they have or have not broken through the median lymphatic glands, in case such exist.

The vasa efferentia of the lateral retro-pharyngeal glands then generally flow behind the nerves and vessels and especially behind the superior cervical ganglion of the sympathetic to the superior glands of the chain of cervical glands which lie near the internal jugular vein.

The lateral retro-pharyngeal glands lie immediately in front of the rectus capitis anticus muscle near to the internal carotid, not far from its entrance into the carotid canal of the base of the skull, (*Glandulas . . . quae ad latum internum carotidis internae resident prope ipsius ingressum in canalem caroticum. Morgagni*).

In new-born children, usually only one (Most) or two glands (Poirier and Cuneo) are found; less frequently three or more lymphatic ganglia are met with in a vertical chain. They are generally developed in childhood, later decrease in volume and disappear entirely in the adult.

The median retro-pharyngeal glands are only found in the new-born and in children at an early age (Most). They are generally represented by one or more lymphatic ganglia which are situated near the median line at the height of the passage from the body of the second cervical vertebrae into the alveolar process.

The postero-superior trunk collects the lymph from the superior portion of the nasal cavity, especially from the medial and superior muscles, as well as from the roof of the nose, the olfactory region of the septum and from the accessory cavities. Most believed that he could prove that all the accessory cavities of the nose send their lymph to the retro-pharyngeal glands by making injections in these cavities near to the point of outlet, that is to say, in the sphenoidal recess and in the neighborhood of the frontal cavity. From these points the injected substance invariably arrived at the retro-pharyngeal glands. But as far as the antrum of Highmore is concerned, Schweizer succeeded in demonstrating by animal experimentation that, by means of injections made in the cavity itself near to the tooth pulp, lymphatic tracts might be demonstrated which, passing through the intra-orbital foramen, reach the submaxillary lymphatic glands.

The antero-inferior lymphatic trunk, composed of from two to four branches, receives a part of the lymph from the inferior muscles, the floor of the nose, and the greater part of the septum, flows downwards and outwards, and, forming anatomoses with the lymphatic vessels of the palatine arch and the tonsillar region, penetrates the lateral wall of the pharynx. It then sinks into the lymphatic glands that lie about the internal jugular vein—to speak

more accurately, into that gland lying beneath the biventor muscle, in which the antero-external lymph stream also empties (Hauptdruese, Most). The existence of communication between the lymphatic vessels of the nose and of the tonsils, to which Most has already called attention, has recently been proved by the experiments which Schoenemann and Zoltán von Lénárt carried out on living human beings. These experiments show that pigments which are injected into the mucous membrane of the inferior muscle find their way in a short time to the tonsils and they are indeed found in the deeper parts of these organs and scattered throughout the lymph spaces between the clefts in the connective tissue as well as within the follicle where they are frequently met with in large quantities enclosed in the leucocytes. In a few places the pigment grains are found immediately beneath the basement membrane of the epithelium and also in the epithelium itself, sometimes free, sometimes enclosed in the leucocytes, the latter of which wander through the epithelium here and there and reach the surface, as my assistant, Dr. Federici, has shown.

The experiments of Lénárt further prove that a very intimate connection exists between the two pharyngeal tonsils, for when the injection is made on one side only, the pigment granules are not only found in the tonsil of that side but in that of the opposite side as well.

Aside from its relations with the pharyngeal tonsils the lymphatic net of the nose and the naso-pharynx also has continuous connection with the lymphatic net which covers the pharynx to its outermost boundaries. This continuity seems, however, to suffer an interruption at the boundary between the pharynx and the esophagus. Thus if the lymphatic system be followed downwards, it will be noticed that a net with wide, horizontally-lying meshes takes the place of the abundant lymphatic structure and that the former is difficult to inject from the pharynx. This would cause one to think, as Most remarks, of a sort of a division of the lymphatic stream, although it would be an incomplete one, corresponding to the fact that the different efferent lymphatic trunks from the inferior division of the pharynx flow upwards in the direction of the sinus pyriformis while the lymph which comes from the upper part of the esophagus flows downwards towards the middle of the tract. This fact becomes comprehensible if it be considered that the pharynx as well as the esophagus possesses special regionary lymphatic glands, separated one from the other. If we summarize, we see that the posterior lymph stream of the nose reaches the deep

cervical glands, either directly or indirectly, i. e., by the way of the retro-pharyngeal glands. But we have seen that the anterior lymph stream reaches the same chain, we might almost say the same gland (Hauptdruese, Most), by way of the parotic and sub-maxillary lymphatic glands. According to the experiments of André on the cadaver, and of Lénárt on the living body, this fact of the converging of the lymph stream which flows from the inferior muscle towards the front and the stream which flows towards the back occurs almost simultaneously.

In the chain of the deep cervical glands the lymph which comes from the nose and the naso-pharynx flows together with that which comes from all the lymphatic tracts of the skin of the face and head as well as with that from those portions of the esophagus and trachea situated in the neck. Flowing through the deep cervical glands the lymph reaches the venous system: at the right it empties directly at the point where the internal jugular and the sub-clavian meet, at the left by means of the thoracic duct.

In reference to the behavior of the deep cervical glands, to which the lymphatic net of the nose and the naso-pharynx is tributary, it is to be remarked that no form of anatomical channels exist by which the lymph of the cervical region could reach the para-trachial and tracheo-bronchial glands; rather do the lymph tracts which come from the bifurcation, the bronchia and the lungs empty directly into the latter. If communication exist between these two different regions, the cervical glands on the one hand and the tracheo-bronchial glands on the other—it can only be by way of the supra-clavicular glands and by means of a sort of return flow of the lymph from the tracheo-bronchial glands to the supra-clavicular glands, but not in the opposite way. This fact has significance in estimating the supposed spread of disease-germs from the nose and the naso-pharynx to the peri-bronchial glands.

Via Assorotti, 12 pp.

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THE LYMPHATIC APPARATUS OF THE NOSE AND NASOPHARYNX IN ITS RELATION TO THE REST OF THE BODY.*

BY A. LOGAN TURNER, M. D., EDINBURGH.

BACTERIOLOGY OF THE HEALTHY NASAL AND POST-NASAL CAVITIES.

—"In spite of certain conflicting opinions regarding the relative prevalence and virulence of micro-organisms in the healthy nasal passages, the investigations of Park and Wright, St. Clair Thompson and Hewlett, Hasslauer, Viollet, Paulsen, Strauss, von Besser, Lewis and Logan Turner and others, have clearly demonstrated their existence under normal conditions." In the author's own researches (*Edinb. Med. Jour.*, Nov., 1905), twenty-six specimens were examined from sixteen persons and only three were sterile. The organisms present were pneumococcus (four cases), micrococcus pyogenes (thirteen), and streptococcus (six), as well as the bacillus of Hoffmann, Friedlander's bacillus, *Bac. mesentericus*, *Bac. proteus* and *Bac. aureus*. In only two of the healthy cavities were the organisms pathogenic, one of these being the streptococcus. C. E. West is of the opinion that the bacterial flora of the post-nasal space in health differs very little from that found in chronic catarrh.

THE HEALTHY ACCESSORY SINUSES.—Bacteriological investigation of the healthy accessory sinuses does not seem to have been carried out during life. The sinuses of twenty-two cadavers examined by Törne within two and a half hours after death were found sterile, while fourteen cadavera examined by Törne and twenty-eight cadavera examined by Frankel all from three to twenty-four hours after death, exhibited sterile sinuses in about half the cases.

BACTERIOLOGY OF THE NASAL AND POST-NASAL CAVITIES IN ACUTE AND CHRONIC CATARRHAL CONDITIONS.—Of one hundred and forty-eight cases of acute, sub-acute and chronic rhinitis observed by Walter (*J. A. M. A.*, Sept., 1910), Allen (*Lancet*, Nov., 1908), and the author, the causal agent was found to be micrococcus pyogenes, bacillus coryzae segmentosus of Cantley, micrococcus catarrhalis and Friedlander's bacillus, less frequently, streptococcus and pneu-

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micrococcus. The bacillus of Hoffmann, the *Bac. mesentericus* and the *Bac. influenzae* were also isolated, the latter only once. Fifty cases of chronic post-nasal catarrh investigated by C. E. West (*Jour. of Laryng.*, Feb., 1911), were characterized by a sparsity of bacterial type. The pneumococcus (70 per cent of the cases), micrococcus pyogenes, and streptococcus salivarius were the usual types found. Friendlander's pneumo-bacillus, micrococcus catarrhalis and a coccus, morphologically indistinguishable from meningococcus, were found a few times.

BACTERIOLOGY OF INFLAMMATORY CONDITIONS OF THE ACCESSORY NASAL SINUSES.—The observations of the author and of Dr. F. Esmond Reynolds, in twenty-two cases of acute and chronic fronto-ethmoidal sinus suppuration and in forty cases of maxillary sinus operation showed the most common types of bacteria present to be pneumococcus, micrococcus pyogenes and streptococcus pyogenes. *Bac. influenzae* and *Bac. tuberculosis* were isolated once and the *mic. catarrhalis* twice.

"It is obvious therefore, from the brief foregoing account, that a variety of micro-organisms may be found in the healthy nasal and post-nasal cavities of most individuals; and also in the same cavities and in the accessory nasal sinuses of many persons who are apparently in the enjoyment of excellent health, but who are at the same time suffering from a chronic catarrhal or muco-purulent inflammation of the mucous membrane of their upper respiratory passages. The chief organisms which are found and which demand our attention are the pyogenic cocci, the pneumococcus, the micrococcus catarrhalis, the influenza bacillus, the meningococcus and the bacillus tuberculosis. In the healthy upper-air passages the bacteria are frequently in smaller numbers, in pure culture, of lower vigor and of little or no virulence, as compared with the organisms which are present in the inflammatory conditions. In the latter they grow with vigor in sub-cultures and are frequently pathogenic to animals. From a variety of causes, however, such as debility, chills, traumatism (causes diminishing the tissue resistance), or from the introduction of a fresh organism, bacteria previously quiescent or avirulent may become active and give rise to acute infections."

GENERAL SCHEME OF THE INVESTIGATION.—"In the following table we have indicated the various organismal infections which may have a primary focus in the nasal and naso-pharyngeal cavities, and which we now propose to consider. We have already seen

that the organisms, which produce them, may be cultivated from these cavities in their healthy state or in simple catarrhal conditions. Although it is possible to demonstrate, in some instances, the lymphatic channels as pathways of infection; in other conditions again, we cannot do more than assume that the lymphatic vessels may be the avenues along which the organisms are carried to neighboring structures. Namely:

"A. From the nasal and naso-pharyngeal cavities to the cerebro-spinal meninges: (a) suppurative meningitis (pyogenic organisms); (b) influenzal meningitis (Pfeiffer's bacillus and allies); (c) pneumococcal meningitis (the pneumococcus); (d) epidemic cerebro-spinal meningitis (the meningococcus); (e) acute poliomyelitis; (f) tuberculous meningitis (bacillus tuberculosis). B. From the nasal and naso-pharyngeal cavities to the cervical lymphatic glands: glandular enlargement and pulmonary disease (bacillus tuberculosis).

"While the chief function of the various meningeal spaces, with the fluid contained within them, has been long regarded as serving as a protection to the brain against alterations in pressure, anatomists in more recent times have looked upon them as lymph spaces. Schwalbe first demonstrated, by injection of the subdural space, paths of communication between it and the olfactory mucous membrane, the perilymphatic space of the labyrinth, and the perichoroidal space. Key and Retzius by injecting the same region were able to follow the injection into lymphatic vessels which left the skull through the jugular foramen and carotid canal. They were also able to inject, from the subdural space, lymphatic vessels in the nasal mucous membrane. Flatau (*Deutsche med. Wchnschr.*, 1890), was able to inject the lymphatic vessels of the naso-pharynx from the subarachnoid space. Cuneo and André (*Ann. des Malad. de l'Oreille*, 1905), have succeeded in injecting a lymphatic network in the pituitary membrane from the meningeal spaces in young human subjects; the vessels, traversing the cribriform plate by small canals, which are independent of the small olfactory nerve branches. This lymphatic network would appear to belong exclusively, or almost exclusively, to the olfactory region; and, in this way resembles the similar extensions into the inner-ear and the globe of the eye.

"Our knowledge of the arrangement and distribution of the lymphatic apparatus of the accessory sinuses is still very meager; and we are unable to give any descriptive account of them."

A. NASAL AND POST-NASAL CAVITIES TO THE CEREBRO-SPINAL MENINGES.

The cases of meningitis, abscess and sinus thrombosis which have followed primary inflammation of the nasal cavities and accessory sinuses now forms a fairly extensive series in literature. The route of infection in the majority of cases is shown on the operating-table and in the post-mortem room to be, by way of a carious or cario-necrotic condition of the bony walls of the adjacent cavities. In other cases venous channels either directly through adjacent walls or indirectly by way of the ophthalmic veins to the cavernous sinus constitute another pathway of infection. "When neither macroscopic nor microscopic evidence of any of these avenues can be found, it may then be legitimate to assume that the lymphatics (if such exist), have been responsible for the propagation of the infection to the brain and its coverings. We have endeavored in the following description, to analyze the evidence in favor of the latter route of infection in meningitis."

(a) *Pyogenic or suppurative meningitis*:—The monographs of Dreyfuss, Gerber and others quote fatal intracranial complications following the application of the cautery to the nasal mucus membrane; removal of nasal polypi; excision of the middle turbinate in cases of ethmoidal suppuration; and the resection of the septum in cases in which there existed no focus of suppuration. But detailed post-mortem examination as to the mode of infection was not reported.

Of the many cases of suppurative meningitis accompanying inflammation of the nasal sinuses, very few were regarded as resulting from infection by way of the lymphatics and in these few detailed microscopic findings are lacking. "It is obvious, therefore, that the conclusive proof of intracranial infection by pyogenic organisms from the nose, by way of lymphatic vessels requires more direct evidence than has yet been obtained. In addition to the cases already mentioned, others are recorded, e. g., those of Huguenin, Ogston and Warner, in which, to the naked eye, no bone lesion was apparent. Ortmann's case, however, demonstrates the fact that even in such instances, microscopic examination proves that the infection will spread through the bony walls by continuity of inflammation; therefore, one is not justified in assuming, that because there is no macroscopic change in the bone, the infection must in consequence have spread by lymphatics. In all fatal cases of this kind a more minute histo-pathological examination is very desirable."

(b and c) *Pneumococcal and influenzal meningitis*:—"Although meningitis due to both of these organisms may result from a blood infection, there is evidence of a direct meningeal infection from the nasal, post-nasal and accessory nasal cavities." Here again in the cases used for illustration, we are forced to assume, rather than bring proof of the exact pathway of infection. A case of Zörkerdörfer is cited which examined post-mortem revealed inflammation of the mucous membrane of the nasal, ethmoidal and sphenoidal cavities the latter being covered with pus. "There was a well-marked lepto-meningitis both of the convexity and of the base of the brain. Fränkel's pneumococcus was found in the meninges and in the sphenoidal sinuses. Microscopical examination showed of the brain. Fränkel's pneumococcus was found in the meninges blood vessels but not bacteria; while the meningeal exudate was infiltrated with cocci. He was therefore inclined to the view that the passage of the organisms into the cranial cavity had taken place either by the lymph channels or by the inflammation spreading by continuity of tissue through the walls of the sphenoidal sinus to the membranes. It is unfortunate that no histological examination of the bone was made." Graber has recently (1910) discussed the pathway of infection in pneumococcal meningitis and considers that it may occur by the lymphatic channels as well as by the blood.

"Meningitis due to Pfeiffer's influenza bacillus, although not common, is now well recognized. While it must be borne in mind, in the light of certain of the cases showing evidence of a general pyemia, that the suppuration in these cavities and in the meninges may arise from some common source of infection in the body, a provisional opinion may be expressed that in many of them, perhaps in the majority, the meningitis results from the spread of an infective condition from the naso-pharynx."

(d and e) *Epidemic cerebro-spinal meningitis and acute poliomyelitis*:—Westenhöffer's researches and those of Lingelsheim have made it more probable that the nasal cavities proper and the accessory sinuses do not serve as the portal of infection in meningococcus cerebro-meningitis in the same way as does the naso-pharynx. Their post-mortem histological and bacteriological findings led to this conclusion. In the one case in which Meyer observed the outbreak of the disease, naso-pharyngeal symptoms preceded the others. It should be pointed out, that Flexner has been able to demonstrate in monkeys the passage of the meningococcus within the

leucocytes from the meninges into the naso-pharynx, so that in cerebro-spinal meningitis the naso-pharyngeal mucous membrane may serve both as an exit and as an entrance for the organism. In man it is naturally difficult to establish the former. In this as in other forms of meningitis the part played by the lymphatical vessels in the propagation of infection is still open to further investigation.

Flexner believes that in acute poliomyelitis the nasal mucous membrane serves not only as the portal of infection, but also as the path of elimination of the virus and he further considers that all the theoretical conditions required to establish the naso-meningeal route as the direct one for infection have been supplied by experiment. Wickham has called attention to the lymphaticus as a route of infection. Other possible paths of infection, e. g., sciatic nerve, olfactory nerve and accessory sinuses considered by several authors need further information.

(f) *Tuberculous meningitis*:—The existence of tubercle bacilli in the healthy nose, their presence in adenoid vegetations and the occurrence of primary nasal tuberculosis would naturally lead us to consider the nasal passages as a source of meningitis. Magunna inoculated nasal mucous membrane of twenty guinea pigs with an emulsion of tubercle bacilli. In one-half the cases inoculation was accomplished by injecting a few drops into the membrane while in the other half a few drops of emulsion were merely laid on the mucous membrane. Three from each of these two groups died of meningitis within sixteen to thirty days. Renshaw's experiments with four guinea pigs inoculated in the superior meatus were negative. No proof is forthcoming as to the path of infection in Magunna's cases nor was it proved that the meningeal infection was tubercular. "The anatomical researches of André upon the naso-meningeal communications show that the lymphatic network occupies the olfactory portion of the nasal cavity and is distributed upon the upper fourth or third of the nasal septum and external wall of the cavity. The extent of this area will doubtless vary therefore in different animals. At the same time it might exert an important influence upon the seat of inoculation in experimental work. In two experiments carried out for me by Dr. I. S. Fraser, in which the anterior part of the nasal fossa was inoculated, no meningeal inflammation was set up." As evidence that tuberculous meningitis may be secondary to a focus in the nasal cavity the cases of Demme and of Huey have been reported.

SUMMARY:—"It is evident from the foregoing account, that the part which has been assigned to lymphatic vessels in carrying infection from the upper air passages to the cerebrospinal cavities is largely speculative and that definite proof of the same is still wanting. It appears to us from the data collected, that some writers have given to lymphatic channels between the nasal and accessory nasal cavities on the one hand and the central nervous system on the other a position which is hardly justified by anatomical facts as at present known. Even granting that future investigation may demonstrate a well-developed network of intercommunication, the lymph flow through it will take a direction from the brain towards the nasal cavities and cervical lymphatic glands. Consequently the danger of meningeal infection by such an avenue from organisms in the nasal cavities will be diminished. The statement of Flexner already referred to, that the meningococcus will pass from the meninges into the naso-pharynx and that the naso-pharyngeal mucous membrane thus serves as a gate of exit for the organism furnishes experiential evidence upon this point. In the great majority of cases of chronic nasal suppuration in which an intra-cranial complication has developed, evidence has been found demonstrating the spread of the infection through disease of the contiguous bony wall. In cases of meningeal infection, however, in which no chronic nasal disease has existed and in which destruction of the bony walls has therefore not been possible, some other path of infection must be looked for. This may be and in some cases has been definitely shown to be by venous channels. That such infection, however, may take place by lymphatic channels, will require further investigation, first along anatomical lines and secondly by careful microscopical examination both in experimentally induced meningitis and in fatal cases in which nasal and accessory sinus disease has furnished the primary focus of infection."

**B. TUBERCULOUS INFECTION OF THE CERVICAL LYMPHATIC GLANDS AND LUNGS FROM THE NASAL AND NASO-PHARYNGEAL MU-
COUS MEMBRANE.**

In this paper the tubercle bacillus is to be used to illustrate the relation of the lymphatic system of the nasal and post-nasal cavities to the rest of the body. While the main avenues of tubercle infection are inhalation, ingestion and lymphatic invasion we have now to consider aerogenic versus lymphatic invasion.

(1) *Anatomical considerations:*—"The regional lymphatics of the nose and naso-pharynx so ably worked out in recent years by Most (Die Topographie des Lymphgefäßapparates des Kopfes

und des Halses. 1906) may be briefly summarized here in order to make more clear the clinical points which follow. With the exception of a small area of mucous membrane in the anterior part of the nasal cavity from which the lymph channels pass forwards on to the face, the main lymphatic drainage passes backwards through the choanae. The lymphatic vessels, along with those from the naso-pharynx and from the palatal arch and faucial tonsil, terminate in the superior deep cervical glands, some of which lie along the internal jugular vein, while others are placed more laterally beneath the sterno-mastoid muscle and upon the anterior scaleni muscles. The lymph flow from both these groups passes into the inferior deep cervical glands which, like the superior, lie in two groups, one placed more superiorly and externally in the supraclavicular triangle, the other more mesially placed in relation to the internal jugular vein and common carotid artery extending behind the inner end of the clavicle. The efferent vessels from the inferior deep cervical glands form a common lymphatic jugular trunk, which opens on the right side of the neck into the veins at the junction of the internal jugular and subclavian veins, and on the left side into the terminal bend of the thoracic duct.

"It is necessary for our purpose to note further the lymph flow in the mediastinal glands. The tracheal and bronchial glands receive their afferent vessels from the mucous membrane of the trachea, the bronchial tubes and pulmonary alveoli. The efferent vessels from the tracheo-bronchial glands, along with the majority of the parietal and the whole of the visceral lymphatics of the thorax, assist in forming a broncho-mediastinal trunk, which terminates like the jugular trunk in the large veins at the root of the neck upon the right side and in the thoracic duct on the left side.

"It is evident therefore that the lymphatic drainage of the nose and naso-pharynx passes through the deep cervical glands into the venous circulation at the root of the neck and has no direct communication by efferent lymph vessels with the tracheo-bronchial glands. Similarly, the lymph from the tracheo-bronchial glands, passes into the venous circulation and has no direct communication with the inferior deep cervical glands. The supra-clavicular glands, however, receive certain afferent vessels from the arm, the integuments of the pectoral region and also from the mamma."

Two clinical cases of involvement of the mediastinal glands are cited by the author which tend to show, however, that the supra-clavicular glands may receive afferent vessels from the mediastinum.

Experimental consideration:—Experimental evidence that tubercle bacilli inoculated upon the mucous surface of the upper air passages will infect the cervical glands seems to be sufficiently well established so as to need no more discussion in this place. "Experimental proof, however, as to the mode of extension of the infection from these glands to the bronchial glands or to the lungs is more difficult to obtain, because, when the nasal or naso-pharyngeal mucous membrane is inoculated with tuberculous virus, the possibility of pulmonary infection by inhalation cannot be lost sight of;" again, the bacilli may leave no sign to indicate their point of entry and may be present in the glands without presenting any histological evidence. Three hypotheses have been advanced as to how tubercle bacilli may pass from the cervical glands to the lungs and mediastinal glands: (1) By way of the large veins to the right side of the heart and thence to the lungs, etc.; (2) By direct extension to the apex of the lungs from the lowest of the cervical glands, and (3) By a direct lymphatic connection between the cervical and tracheo-bronchial glands, thence to the lungs. The experiments of Louis Cobbett and of Knowles Renshaw show the possibility of a two-fold avenue of infection. The author concludes: "These experiments furnish proof of the direct passage of infection from the naso-pharynx through the lymph paths to the cervical glands, but in the light of our anatomical knowledge they cannot be regarded as demonstrating the further passage of the organisms from the cervical to the tracheal glands. Even though the lungs remained unaffected, some of the bacilli may have found their way by inhalation to the trachea where an infection of the mucous membrane would give rise to disease of the tracheal glands through their afferent lymphatics."

Clinical and pathological considerations:—The observations of Strauss, Moeller, Noble, Jones, Von Besser, and of the author demonstrate, (1) the presence of tubercle bacilli in some healthy nasal cavities; (2) the production of a localized tuberculosis in the nasal cavities by this lodgment of tubercle bacilli. Fifty-six such cases were observed by the author himself. It is rare to find tubercle bacilli in inflammatory conditions of the nasal accessory sinuses. On the other hand tubercle bacilli or tuberculous histological changes in the naso-pharynx, mainly the naso-pharyngeal tonsil, have frequently been demonstrated. Six per cent of primary tuberculosis of adenoids are shown in 1,611 cases examined by twenty-one observers. As illustration of the ex-

tension of tubercle from the naso-pharynx to the neighboring glands several cases of the author are cited.

In two cases there was microscopically demonstrated the presence of tubercular changes in the adenoid tonsils and the superior deep cervical glands, and this in the absence of any evidence of tuberculosis elsewhere in the body. A similar relation was shown between the pharyngeal tonsils and the deep supraclavicular glands in a third case. As before stated clinical evidence as to the mode of extension from the neck to the lungs and mediastinal glands presents greater difficulties and even post-mortem findings are not conclusive.

As a result of his post-mortem researches on the lymphatic gland pathway in the pathogenesis of pulmonary tuberculosis, Beitzke came to the following conclusions: "As the pulmonary and bronchial gland affection is usually of longer standing and has made more progress than that in the cervical glands, the former have been infected by inhalation of the virus, while the latter have become infected either secondarily by inoculation with tuberculous sputum through the tonsils or independent of the lung disease but coexistent with it and from the same source. Further, that in the absence of any direct lymphatic connection between the cervical and bronchial glands, tuberculous infection of the lungs by way of the cervical glands can only take place through the large veins and the right side of the heart.

"Albrecht from a study of one thousand and sixty tuberculous children, has formulated the view that the primary site of infection is most often in the lung from inhalation. If there is also tuberculosis of the cervical lymphatic glands, it is secondary to the pulmonary affection and it is either of an ascending nature, from the peri-bronchial glands upwards, or descending, from secondary infection of the pharynx through the sputum."

A. Logan Turner points out that of the fifty-six cases of nasal tuberculosis investigated by himself only two developed pulmonary tuberculosis and that while local recurrence occurred from time to time in many of the patients, the deep cervical glands did not become affected.

Referring to the second hypothesis, Graber has expressed the opinion, that when the supra-clavicular glands have become affected, there is an extension of the disease to the thoracic parietal lymphatic vessels. This is followed by an inflammatory exudation with consequent involvement of the visceral pleura and

apex of the lung. Geo. B. Wood and Philip hold similar views. In this connection James Ritchie suggests the possibility of the intra-thoracic negative pressure during inspiration causing a "suction" in the lymphatics around the lungs. This view is opposed by Most and Abrikisoff, who in their post-mortem examinations of patients dying of pulmonary tuberculosis were unable to find gross or histological evidence of antecedent gland tuberculosis.

We have still to refer to the third hypothesis, namely, "that the cervical glands directly infect the bronchial glands and that the bacilli then pass from the latter to the lungs either by a reversal of the lymph current or by entering the blood stream and passing through the right side of the heart. As already shown, anatomical data have failed to demonstrate any direct communication from the cervical to the bronchial glands. The question as to whether the lymph current can pass from the bronchial glands by way of their afferent vessels back to the lungs raises the interesting point as to the reversal of the lymph current, a subject which has been discussed in connection with glandular infection. If this is possible the difficulty in studying the paths of infection through lymphatic glands is increased. As the tubercle bacillus is a non-motile organism it cannot make its way against the normal lymph stream. Most argues that it is not possible to force injection from the bronchial glands to the lungs and he has been unable to inject lymphatic vessels in a contrary direction on account of the action of their valves in opposition to it."

SUMMARY:—"In summarizing the second part of our subject, the connection between the nasal and naso-pharyngeal lymphatics and the rest of the body, as exemplified by the invasion of the tubercle bacillus, we are forced to the conclusion that further investigation and observation are still necessary. Certain anatomical and clinical facts however must be regarded as proved. The lymph drainage of the upper air passages passes through the cervical chain of glands and enters the large veins at the root of the neck; further, the tracheo-bronchial glands derive their afferent vessels from the mucous membrane of the lower respiratory passages and pulmonary alveoli, while their efferent vessels pass to the large veins at the root of the neck and enter the blood stream. No efferent vessels have been demonstrated between the deep cervical and the tracheo-bronchial glands.

"Both experimentally and clinically it has been shown that tuberculous disease of the cervical lymphatic glands may be derived from infection of the nasal and naso-pharyngeal mucosa by the tubercle bacillus. As to the manner in which the bacilli pass from the cervical glands to the lungs, two explanations have been offered: first, by way of the deep efferent cervical lymph vessels discharging into the lymphatic duct upon the left side of the neck, and on the right side directly into the large veins, thence by the right side of the heart and pulmonary artery to the lungs; secondly, by an extension of the inflammatory process from the diseased inferior deep cervical glands directly to the pleura and apex of the lung. Experimental evidence has been brought forward in support of the extension of the tuberculous disease by the first or anatomical pathway, but we have failed to bring forward pathological post-mortem data in support of direct extension from the cervical glands to the apex of the lung.

"The fact that more than one portal of entry exists in the upper air passages increases the difficulty in estimating the actual part played by the nasal and naso-pharyngeal lymphatics in distributing infection. Tubercle bacilli may be inhaled into the lungs and the cervical lymphatic glands may be secondarily infected by the bacilli in the sputum entering through the pharyngeal lymphoid tissue. Further, infection by inhalation may take place concurrently with infection of the cervical glands from the nasal mucosa derived from one and the same infective source. Again, the tubercle bacilli may pass through the mucous membrane of the upper air passages and the cervical glands without leaving any evident trace of their passage, consequently this pathway of infection may clinically pass unnoticed."

20 Coates Crescent.

Dental-plate Twenty-one Months in Larynx. BOBONE. *Boll. delle Mal. dell'Orecchio della Gola e del Naso*, March, 1911.

The plate occupied two-thirds of the laryngeal vestibule and almost half of the right larynx above the vocal cords without provoking serious disturbances either in respiration or phonation.

Ed.

THE LYMPHATIC APPARATUS OF THE NOSE AND THE NASO-PHARYNGEAL CAVITY IN ITS RELATIONS TO THE OTHER PARTS OF THE BODY.*

BY JULES BROECKAERT, M. D., GHENT, BELGIUM.

In a previous paper, my honored colleague, Dr. Poli, has given us the result of his anatomical researches and has described to us the lymphatic apparatus of the nose and the naso-pharynx in all its details.

The author at this point discusses the main anatomical relations of the lymphatic apparatus of the nose and naso-pharynx to the various neighboring structures, viz., the face, pharynx, and larynx, the pituitary membrane, the tonsillar ring of Waldeyer, the pharyngeal and palatine tonsils, and the various systems of glands in the head and neck.

These then are the pathological relations, based upon the anatomical knowledge just reviewed, which we are going to study. Our distinguished confrere, Dr. Logan Turner, has kindly undertaken the bacteriological question more particularly and has given us a view of the relations which exist between certain affections of the meninges, the ganglia, and the lungs and the lymphatic apparatus of the nose and the nasal cavities. It is our task to complete this work and to study the rôle which this apparatus plays in the infections and the neoplastic formations in other parts of the organism.

THE PHYSIOLOGICAL RÔLE OF THE LYMPHOID TISSUE OF THE NOSE AND THE NASAL CAVITY:—Before approaching the subject of the pathological relations which exist between the lymphoid tissue of the nose and nasal cavity and the other parts of the organism, it is necessary to recall and to determine the most important points in our knowledge of its physiological rôle.

At the same time, we have not the slightest intention of presenting in this report a complete study of the question, which is still very much entangled, and which has, moreover, been made the subject of many dissertations, among which those of Goerke and those of Levinstein constitute excellent contributions to the question. Although the greater part of these treatises are more particularly concerned with the physiology of the palatine tonsil in which we are not now interested, one is justified in applying the results of these

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researches to the pharyngeal tonsil and to all the other lymphoid tissue of the nose and nasal cavity as well; we will even go farther and will try to demonstrate the similarity of function which exists between the various tonsils and the lymphatic ganglia.

Stoehr, Flemming, Paulson and others have shown that "there exists in the follicles germinal centers (Keimzentren), which must be considered as areas of cellular reproduction. They are not only found in the tonsils proper and in the various lymphoid areas which, taken together, make up the tonsillar ring of Waldeyer, but also in the cortical portion of the lymphatic glands." Another fact to be noted is the "emigration of the leucocytes across the epithelium of the adenoid tissue." In well-prepared slides these "migratory elements may be seen insinuating themselves between the epithelial cells, traversing the various layers composing the epithelium, and at last arriving at the surface." The majority of these leucocytes were considered by Brieger and Goerke to be lymphocytes whose movement is merely a passive one. They are usually less in size than the red blood corpuscle and they possess one large nucleus." Whether active or passive, this emigration of the cells, produced by karyokinesis at the expense of the large germinative cells of Flemming, through the interior of the lymphatic follicles, has actually been proved; moreover, it is probable that a certain number of these neo-formed elements are drained into the lymphatic torrent, to at last pass into the general circulation of the blood. The tonsillar ring of Waldeyer thus completes its resemblance to the lymphatic ganglia in being like them a center of leucocytic genesis and perhaps even of hematopoiesis." What is the role of these leucocytes? Metschnikoff and others have concluded that these small leucocytes do not possess the property of being phagocytes. But if we attentively examine them microscopically we actually find that they increase in direct proportion to the danger to which the whole organism is exposed. They may be seen flattening out, insinuating themselves between the cells, coming forth in quantity which is greater in exact proportion as the irritation produced on the surface of the tonsil is increased. These facts seem incomprehensible enough when an active rôle is denied the lymphocytes. By the side of these microcytes, here and there a few poly-nuclear cells are met which greatly increase in numbers when the adenoid tissue is the seat of local irritation. These observations would seem to show that the tonsillar ring of Waldeyer is or may become an organ of defense against the inert or the living particles which its afferent vessels bring it, or which come to it from the outer world.

Certain physiological experiments conducted by Frederici led him to the same conclusion. Goodale, Hendelson and Lexer determined by experiment that the tonsils are able to absorb particles, e. g., staphylococci from the mouth, while Hodenpyl, Brieger and Goerke obtained just the opposite result and attach little importance to the supposed leucocytic rôle of the tonsils.

Roszbach has pointed out the presence of a ferment in the tonsil which he calls the "amylose." On the other hand, cytolysis has also been recognized. Up to the present time, however, little has been learned about these amorphous secretions.

However, be the solution to this question what it may, we admit that the tonsillar ring of Waldeyer, composed to a certain extent of lymphoid glands, a species of ganglia extending superficially back of the posterior nares, at the entrance to the isthmus, may constitute, under certain normal conditions, a more or less serious barrier against microbes which have come through the nasal or buccal passages. But how many times does this act of defense against the microbic invasion become insufficient! Not infrequently indisputable, the defense of the organism seems to be very variable or at least frequently illusory. And even by the disposition of its crypts—veritable receptacles in which the various products which serve as culture mediums for the most diversified microbic growths accumulate—the lymphoid tissue of the nose and the nasal cavity, like that of the palatine tonsils is itself very particularly exposed to infection and to act as port of entry for the diverse affections, several of which we shall now discuss.

Whatever the useful but still much discussed rôle of the lymphoid tissue of the tonsillar ring of Waldeyer may be, clinical experiences force us to attribute to it, under many circumstances, a greater degree of vulnerability than to the other parts of this region. Do we not every day see cases of pseudo-membraneous angina clearly localized, while the remainder of the mucous membrane of the nasal fossae and of the nasal cavity continues healthy? Do we not know of very numerous examples of primitive chancre of the tonsil, as a result of a direct infection of the lymphoid tissue from an external passage? With Levinstein we believe that the greater part of the acute infections which attack the tonsillar ring of Waldeyer are primary. At the same time, we have not the slightest intention of denying the existence of acute secondary infections of the lymphoid tissue of the nose and naso-pharynx; traumatic angina following operations is incontestably a typical example of it.

On the other hand, general diseases, such as syphilis, may give rise to distinctly secondary disease of the tonsillar ring of Waldeyer. The same is true of scarlet fever and most other eruptive fevers, which may be complicated with secondary angina, whose cause is to be found either in a specific agent of the disease, or in a more complex etiology. Any infection of the lymphoid tissue, either general or local, may become the starting point for various complications, in which the lymphatic channels play a leading role. The infecting germs may even penetrate by way of the lineal albicantes of the mucous membrane, of the pituitary membrane, or of the pharynx, travel to the nearest ganglia, and then invade the whole organism.

We shall first study those acute infections, for which the lymphatic apparatus of the nose or nasal cavity may serve as the port of entry; we shall then see what causal relations exist between this lymphatic apparatus and certain chronic affections. We shall terminate our work with a summarized study of the relations existing between the neoplasms of the lymphatic apparatus of the nose and naso-pharynx and the rest of the organism.

I. ACUTE INFECTIONS HAVING THEIR STARTING-POINT IN THE LYMPHATIC APPARATUS OF THE NOSE AND NASO-PHARYNGEAL CAVITY.

1. Acute Infections of the Ganglia (a) Adenitis. Since it is fundamental that any infection involves the glands corresponding to the anatomical region invaded, we expect and find that most of the acute lesions of the nose and naso-pharynx are accompanied by adenitis; however, as Gelle has said, the intensity of the glandular reaction is far from being in relation to the intensity of the nasal infection.

Certain diseases of the vestibule of the nose, such as a furuncle, a folliculitis or, in infants, an impetigo may give rise to an acute adenitis. The glands most frequently involved are the submaxillary on the side of the lesion, with an occasional slight reaction in the same gland of the opposite side. It is not unusual to find at the same time a painful congestion of the buccal glands situated on the external surface of the buccinator muscle in front of the masseter muscle.

Still more frequent source of glandular infection are acute infectious rhinitis, naso-pharyngitis and adenoiditis, especially the purulent rhinitis of scarlet fever and diphtheritic rhinitis; in the latter, indeed, adenopathy is seldom lacking. In general, the infections of the nose are accompanied by adenitis of the superior

glands of the inferior jugular chain, which receive the lesser and inferior trunks of the lymphatics of the nasal fossae. These glands are quite readily explorable by palpating the carotid region below the sterno-cleido-mastoid muscle. It is exceptional to find the sub-maxillary glands attacked. In acute rhino-pharyngitis it is not only the retro-pharyngeal glands but also the deep cervical chain that are involved and often intensely.

Primary diphtheritic adenoiditis, a condition frequently overlooked, is characterized by a troublesome cervical adenopathy.

We have yet to point out the glandular infections which may unexpectedly appear in certain cases of acute sinusitis. The data on this subject is certainly far from plentiful and we know of nothing more than a few observations (Caboche, Gellé), where the co-existence of an attack of sinusitis and an attack of acute adenitis has been remarked upon.

An initial syphilitic lesion of the vestibule and anterior part of the nose may be suggested on finding a marked adenitis of the sub-maxillary region, while an adenopathy of the deep cervical chain will indicate a primary source in the upper portion of the naso-pharynx or in the neighborhood of the pharyngeal end of the Eustachian tube.

Cases of adenitis appearing after operative interventions on the nose and the naso-pharynx deserve a rather more prolonged study. It happens often enough, following an operation, sometimes after a most insignificant one on the turbinate bone, more rarely on the septum, that infectious symptoms appear which manifest themselves particularly in cervical adenitis and lacunar angina, designated by Fraenkel as traumatic angina.

This angina, which Schoenemann considers as a form of adenitis generally manifests itself after the second or the third day. Limited just at its inception to the tonsil corresponding to the side operated upon, it most frequently spreads to the opposite side within twenty-four hours. The symptoms do not differ from those of follicular or lacunar angina; at first erythematous, it is not long before it becomes distinctly pultaceous. The affection is not always localized in the palatine tonsils; the pharyngeal tonsil may also be the seat of a similar inflammation. (von Lénart).

It is chiefly following the cauterization of the inferior turbinate or galvano-cautery of the turbinal bones that one sees these symptoms appear; the plugging of the nose with tampons is another one of the causes which is most frequently implicated.

In these cases is it a question of infection by means of the septic products of secretion which reach the surface of the tonsils, or must we admit with Fraenkel and Schoenemann that the germs are carried directly to the interior of the parenchyma by the lymphatics? It is not possible to give a definite answer to this question in the present status of our knowledge.

Analogous symptoms have been observed following the curetting of the naso-pharynx for adenoid vegetations. Koerner, Moldenhauer, Glover and others have reported examples of it. In our own practice of almost twenty years we have seen only a few cases. Why does the infection from trauma of the cavity so rarely bring about the secondary infection of other lymphoid masses of the tonsillar ring of Waldeyer, when we have just observed the very great frequency of tonsil infection after operative intervention in the nasal cavities? Is not this circumstance an argument in favor of the theory of Fraenkel and Schoenemann?

Acute adenopathy following the removal of adenoid vegetations is far from being rare. Many authors have pointed it out and we do not hesitate to affirm that cervical adenitis is here to be accounted among the most frequent and at the same time among the least important complications.

As a general rule, the infectious germs which gain entrance into the lymphatic torrent are arrested in the nearest glands; at the same time, it is possible for them to secondarily reach the more distant ganglia. Thus in the course of nasal and of naso-pharyngeal infections, it is only the sub-maxillary glands, the retro-pharyngeal glands, and the glands of the deep cervical chain which may become infected; it is not unusual to see the glands situated at a much greater distance along the course of the lymph stream become inflamed in their turn and to see this inflammation accompanied by more or less severe general symptoms.

In certain cases the infection reacts upon all the deep-lying ganglia of the neck, thus constituting a large mass which extends under the sterno-mastoid process and descends to within the supra-clavicular depression.

According to certain authors the visceral ganglia of the thorax may in their turn be touched by the infection. As we shall see farther on, it is not very probable that the mediastinal ganglia and the peri-tracheo-bronchial glands can be infected, under ordinary conditions, by the transportation of germs which reach them by lymphatic channels, and whose port of entry would be found at

the height of the nasal and naso-pharyngeal mucosa. In order to understand the invasion of these ganglia as well as those of the sulcus inguinalis, of the axillae, and of the abdomen, it is evidently necessary to admit a more general infection, a sort of septicemia. This complication, even in the course of the so-called glandular fever, seems to be very rare and personally we have never met with it.

Apropos of this, we recall that glandular fever, which seems to pass for a disease in itself, is, in reality, nothing but a syndrome indicating the invasion of the ganglia of the neck secondary to a primary infection, it may be of the palatine tonsil, it may be of one or more of the follicular masses of the tonsillar ring of Waldeyer. It is here a question of an infection carried by a painful form of adenitis, due, it would appear probable, to the streptococcus, and whose port of entry may be found in the mucous membrane of the nasal cavities of the naso-pharynx or of the buccal pharynx; but because the initial lesion cannot always be easily found—for it may be so insignificant as to pass unnoticed—it was believed, though erroneously, that there were here grounds for establishing the existence of an idiopathic form of adenitis.

(b) Adeno-phlegmon. Cases of adenitis following infections of the nose may come to an end either by resolution or by passing into a chronic state. In exceptional cases, they terminate in suppuration. Adeno-phlegmon of the neck or acute abscess of the retro-pharyngeal glands finds, as a matter of fact, its chief port of entry in the great stratum of lymphoid follicles on the tonsillar ring of Waldeyer; it is not unusual to even find that their starting-point is in the mucous membrane of the nose. Cases of purulent rhinitis, so frequent in the course of scarlet fever, frequently produces the purulent infection of the glands of the neck. Let us here recall that in the majority of cases it is the peri-glandular connecting tissue sheath that is first attacked; the gland afterwards becomes involved and finally breaks; thus forming an abscess which is at once intra- and peri-glandular.

Cases of adeno-phlegmon of the neck as a result of operations on the naso-pharynx seem to be very rare. Castex has published a case of pre-carotid phlegmon following adenectomy.

It is astonishing that the purulent infection of the retro-pharyngeal glands so seldom follows the removal of adenoid vegetations. And nevertheless, acute adenoiditis is one of the most common causes of retro-pharyngeal phlegmon in children. From this point

of view, retro-pharyngeal adenitis following pharyngeal tonsillitis may be compared to adenitis of the mandibular angle following palatine tonsillitis. Like the latter, it is exceptional for it to reach the stage of suppuration. (Escat).

2. ACUTE INFECTIONS OF THE EAR:—A great number of cases of otitis are caused and are kept up by affections of the nose and the naso-pharynx. It is useless even to emphasize the important rôle which hypertrophy of the lymphoid tissue of the nasal cavity and of the posterior extremities of the inferior turbinate bones plays in the etiology of the acute infections of the ear. It is through the Eustachian tube that the pathogenic microbes from the nose and the naso-pharynx generally penetrate into the tympanic cavity when the normal resistance is weakened or when certain conditions increase the virulence of the microbes.

Does the tympanic cavity of the ear permit of invasion by way of the lymphatic channels which emanate from the nose and the naso-pharynx.

The relations which exist between the lymphatics of the nose and the network which surrounds the Eustachian tubes into which the stream of lymph coming from the greater portion of the nasal cavities empties, enables us to understand that an infection of the nose may spread by way of the lymphatics as far as the Eustachian tube. Can the germs continue to ascend the lymphatic current and thus reach the network which is annexed to the mucous membrane of the tympanic cavity? There seems to be nothing improbable about this hypothesis; it would even explain the great frequency of tubal and aural infections following a nasal infection.

An infection of the tympanic cavity by lymphatic channels, following adenoiditis or infectious rhino-pharyngitis would seem to be less probable. On the other hand, otitis may become complicated with adenitis, either simple or phlegmonous, of the retro-pharyngeal glands into which the lymphatics of the tympanum empty.

3. ACUTE INFECTIONS OF THE APPARATUS OF THE ORBIT AND THE EYE:—The relations which exist between the sinuses of the face and the apparatus of the orbit and the eye have been made the subject of numerous works. That which interests us, from the point of view which we here take, is to know whether the orbital and ocular complications may be the result of a sinusitis whose spread was due to lymphatic channels.

In spite of our researches, we have been unable to find anything definite on the subject. In all the literature there is nothing

but hypotheses, very plausible ones, perhaps, but which must yet await the sanction of new researches.

4. ACUTE INFECTIONS OF THE MENINGES:—This question has been treated with rare competence by our co-reporter, Dr. Logan Turner. We have already summarily indicated what we think as to direct communications which exist between the sub-arachnoid spaces and the lymphatics of the pituitary membrane. Analogous channels of communication between these spaces and the frontal sinuses were described by Falcone. However the matter may stand, the infections of the nose or of the sinuses may spread to the meninges by making use of the meningeal sheaths of the filaments of the olfactory nerve which represent veritable prolongations of the large sub-arachnoid cavity. Nevertheless, with Sieur and Rouvillois, we admit that this lymphatic tract has in its favor proofs insufficient for us to estimate its frequency or even its reality.

5. ACUTE INFECTIONS OF THE BRONCHO-PULMONARY APPARATUS:—These infections, though rare, yet possess a certain interest for us. Naturally we are not here speaking of tracheo-bronchitis by aspiration—a frequent condition,—but of those infectious processes which appear in the broncho-pulmonary apparatus and whose first source is to be found in the follicles of the tonsillar ring of Waldeyer. From the latter the morbid agent follows the lymphatic route, infects the systemic circulation and thus produces its ravages in the lung.

Broncho-pneumonia seems to have complicated a certain number of cases of pharyngeal tonsillitis with distinctly septic tendencies; at other times pneumonia has developed to complicate a case of adenoiditis or of infectious rhinitis. If it is proved that the same pathogenic agent has engendered both the maladies, it remains doubtful whether pulmonary infection has found its starting-point in the nose or in the naso-pharynx.

Nevertheless, the reality of broncho-pulmonary complications following an infection of the cavum, has been affirmed by a series of observations relative to the infectious respiratory symptoms following adenoidectomy. Beco, Cornet, and Delsaux have pointed it out; personally we have seen two examples. Many others probably exist in the medical literature but it may be taken for granted that the greater part of these cases have never been published. But here too I lack the data necessary to solve the pathogenic problem.

6. ACUTE INFECTIONS OF THE VISCERA:—It is understood that pathogenic germs which have entered the circulation by means of

lineae albicantes in the pituitary or the pharyngeal mucous membrane may occasion disturbances in the various organic apparatuses of the living organism, sometimes by their direct action upon the tissues, sometimes by the irritations which the toxins that they secrete produce. We have no reason to be astonished over this determination of the lesion of disease at a distance and the explanation of it is very simple. After having crossed the first barriers which the ganglia oppose to them, the germs reach the afferent vessels of the inferior glands of the deep cervical chain and then pass into the systemic circulation; from there they are capable of producing the gravest and most varied visceral disorders according to their own virulence and according to the morbid aptitude of the subject or the condition of resistance of each of the organs at the moment of invasion.

A great deal has been written on the subject of the visceral complications of infection of the palatine tonsil; on the other hand, much less is known of the localizations of the infecting agent following an acute disease of the nose or of the naso-pharynx. It is probable, not to say certain, that the complications are the same. Thus why may not the adenoiditis of childhood occasion nephritis since we know that many of the cases of so-called primary nephritis must be referred to affections, sometimes of the most commonplace nature, of the palatine tonsil?

It is likewise to be foreseen that pharyngeal tonsillitis may make an impression upon the endocardium. We do not know whether the facts which have been published have demonstrated the reality of this. We have observed a case of adenoidectomy followed by a rheumatic infection complicated with endocarditis.

In the same way, if only to make the list complete, peritonitis, appendicitis, and typhlitis may be cited as being apt to break out in the course of septic affections of the nose and of the naso-pharynx. Nothing authorizes us to affirm that certain cases which have been described under the label of complications of septic tonsillar angina have not in reality been due to a primary infection of the nose or of the superior portion of the tonsillar ring of Waldéyer.

The same may be said of orchitis in the male and of ovaritis in the female, which in theory may appear, like the inflammation of other organs, in the course of an attack of pharyngeal tonsillitis or of purulent rhinitis. Why should these secondary localizations, convincing observations of which have been published as far as palatine tonsillitis is concerned, not have the right to citizenship in the domain of acute pharyngeal tonsillitis? It is to be hoped that this

side of the question, so interesting in the relations that exist between the lymphatic apparatus of the nose and naso-pharynx and the various organs of the living organism, will not much longer remain in the shade and that the same facts which were formerly disregarded in palatine tonsillitis will soon take a leading place in the pathology of the whole lymphoid system of the tonsillar ring of Waldeyer.

7. ACUTE INFECTIONS OF THE SEROUS MEMBRANES:—The possibility of complications involving the serous membranes in the course of acute infections of the nose or of the naso-pharynx is no longer denied by anyone. Perhaps these symptoms appear here with less frequency than following tonsillitis but if we trust to some of the observations which we have gathered, it is permissible to suppose many escape observation.

Adenoiditis may become complicated with arthralgia; in the same way the infecting germs which have entered into the lymphatics at the height of the nose and nasal cavity, may attack the other serous membranes of the organism, the endocardium, the pericardium, the pleura, the peritoneum, etc.

This gives us occasion to speak of the relation which exists between the infections of the nose and of the naso-pharynx, and rheumatism.

From the very earliest times, the relations between certain forms of infectious angina and rheumatism has been recognized. Thanks to the multitude of treatises which have appeared in recent times on this question, this relation actually no longer occasions any doubt. It is proved that the palatine tonsils may be considered as the door of invasion of certain rheumatic symptoms; we will even say that any infection of the tonsillar ring of Waldeyer, whether general or localized, may become the starting-point of a rheumatic attack.

Our opinion is based upon a certain number of observations which, in our estimation, have brought irrefutable proofs. The observations of Gallois, Broeckart, Beckmann, De Parrel, Kronenberger, De Stella and others are sufficient to demonstrate that a relationship exists between rheumatism and acute infections of the tonsillar ring of Waldeyer. They also prove that, under certain conditions, the pathogenic agents may be transported from the nose or from the naso-pharynx as far as the region of the serous membranes and there create exudative inflammations similar to those which one encounters in cases of true rheumatism.

II. CHRONIC INFECTIONS HAVING THEIR STARTING-POINT IN THE LYMPHATIC APPARATUS OF THE NOSE OR OF THE NASO-PHARYNGEAL CAVITY:—In this chapter we will not occupy ourselves with all the

chronic affections of the living organism which have their starting point in the nose or in the naso-pharynx. It is understood that the pathogenic germ, whatever it may be, may occasion chronic incurable maladies at a distance; in exceptional cases the acute affection may be followed by the chronic one with all its melancholy consequences. Thus the irritant action on the renal filter, burdened with the elimination of soluble poisons secreted by the pathogenic germs developed at the height of the pharyngeal tonsil, may, under certain conditions, become the immediate or remote cause of chronic Bright's disease. Thus also a slight erosion, an insignificant ulceration of the mucous membrane of the naso-pharynx, is sufficient to cause the nearest glands to become the seat of adenitis; if the irritation persists one may meet with cases of simple chronic adenitis of the neck: these are neither tumors nor tubercular alterations but are cases of what the Germans term simple hypertrophic lymphoma.

THE LYMPHATIC APPARATUS OF THE NOSE AND OF THE NASOPHARYNGEAL CAVITY IN ITS RELATION TO TUBERCULOSIS:—The relations between the lymphatic apparatus of the nose and of the nasopharyngeal cavity and tuberculosis may detain us with profit.

For a number of years the palatine tonsils and the mucous membrane of the naso-pharynx have been considered an important port of entry for tubercular infection. Little by little, thanks to a series of experiments and anatomical-pathological researches, the ideas which have been acquired have come to be applied to the entire lymphoid tissue of the tonsillar ring of Waldeyer.

In fact we know through the researches of Strauss, of de Noble, of Freudenthal, and of others, that the tubercle bacillus is frequently met among the habitual "guests" of the nose and the nasopharyngeal cavity. The lymphatic follicles are the first to react to the invasion by phagocytosis. In some cases the outcome is a latent tuberculosis which may maintain itself for a considerable time without the bacilli losing their virulence. This stage may be called the "follicular or intermediate tonsillar stage." Suchannek was the first to describe, in 1888, a case of tuberculosis of the pharyngeal tonsil. Since that time many investigators, Lermoyez, Dieulafoy, Brindel, Luzzato, Fischer, Lewin, Lindt, etc., have found tuberculosis present to the three tonsils in percentages varying from 5 per cent to 16 per cent. On the other hand Broca, Góurl and Wright obtained negative results, as did also Soberheim and Blitz, who used the cutaneous test of Von Pirquet. Tuberculosis of the nasal or of the nasopharyngeal cavities may, as we know,

be present as a primary, or in a secondary form with far-advanced pulmonary or laryngeal tuberculosis.

A. TUBERCULAR ADENITIS:—It is not rare to see a tubercular adenitis follow a tubercular lesion of the nasal or of the naso-pharyngeal cavities. This may be called the second or "glandular stage" in the evolution of tuberculosis. In many of these cases the portal of entrance is not found. This stage is relatively more frequent in childhood. Chronic lesions of the mouth, teeth and face must also be looked to as a source of these infections.

Another condition under this head not to be overlooked is chronic pharyngeal abscess.

B. VISCERAL TUBERCULOSIS:—Tubercle bacilli may take refuge in the lymphatic glands of the neck for a considerable length of time without betraying their presence by apparent lesions and without losing their virulence. From this place of refuge they may later go to infect other organs, notably the lungs, and provoke the outbreak of an attack of pulmonary tuberculosis to which an inhalatory origin will be assigned when in reality it is of nasal or naso-pharyngeal origin. In the same way they may bring about an attack of renal tuberculosis, of tuberculosis of the liver or of one or the other of the visceral organs. It is a third stadium in the evolution of tuberculosis: the visceral stage.

(a) *Pulmonary tuberculosis*:—How can the tubercle germ travel from the ganglia of the neck to the lungs? Opinions as to the answer which should be given to this question vary greatly. One may admit with Ferruccio Putelli, to whom we are indebted for a well-supported report on the infection of the organism through the intermediary of the lymphatic tonsillar ring of Waldeyer, that the tubercle bacilli may follow one of three channels in order to arrive at the interior of the thorax.

1. The first channel, which might be designated under the name of the anatomical channel because it is the only one admitted by the majority of anatomists, is made up of the numerous vessels which between them bind together the various glands of the neck and of the efferent vessels of this cervical chain. These efferent vessels all empty into one trunk, the jugular vein, which carries the lymph from both sides of the head and of the neck and leads it into the venous system. Carried along by the lymph the tubercle bacilli enter the vena cava superior, traverse the heart, and through the pulmonary artery reach the lungs with the blood. The secondary formation of tubercles in the lung and the development of pulmonary lesions is thus explained.

A majority of the anatomists, notably Poirier, Merkel, Most, von Bardeleben, etc., admit that the cervical glands to which the supra-clavicular glands belong, do not receive any vessels from the mediastinal ganglia. According to them, there is said to be no channel of communication between the ganglia of the neck and those of the thorax. According to Mascagni and Sukiennikow, however, there is said to be a lymphatic trunk which binds together the tracheo-bronchial ganglia and the inferior glands of the neck. However this may be, the manner of dissemination through the anatomical channel seems to us to be indisputable. It has, moreover, been adopted by several clinicians of great renown, such as Dieulafoy, Cobb, Chiari, etc.

There is still another mechanism for the invasion of the blood by the virus of tuberculosis and which may give us the key to certain pulmonary lesions secondary to attacks of cervical adenitis. This invasion follows the presence and the dissolution of tubercles on the internal surface of the veins in the primitive tuberculous focus. Weigert and, following him, other authors have brought anatomical evidence in support of this point of view.

Lastly, Koch has pointed out a third mode by which bacilli may penetrate into the systemic circulation and which consists in the invasion of the small arterioles by the tubercular process. In certain glands he saw arterioles surrounded by tubercles extremely rich in bacilli which at certain points penetrated into the channels of the vessels.

2. Aside from this channel of infection—if not the only one at least the chief one—Pfeiffer, Grober, Klebs, Beckmann, Wassermann and Volland think that the tubercle bacilli can reach the pleural dome and the summit of the lung directly by spanning the short distance which separates them from the supra-clavicular ganglia. Grober bases his belief chiefly upon two experiments which he undertook upon dogs by injecting China-ink into their tonsils; after several hours he found particles of coloring-matter in the cellular tissue of the neck, in the pleural dome, in the lungs and in the broncho-mediastinal ganglia.

Beitzke took up these experiments and has dedicated an important work to them. In performing the injection into the deep cervical glands it was not possible for him to make the coloring-matter pass as far as the intra-thoracic vessels; nevertheless, after injecting into the tracheo-bronchial glands he saw in each of his experiments a certain large gland belonging to the deep jugular chain and situated a little above the omohyoid muscle become colored. Accord-

ing to Beitzke, the passage of the tubercle bacillus from the cervical glands to the intra-thoracic glands cannot then be accomplished without admitting thereby a retrograde movement.

In our opinion, the glands of the neck can, in certain cases, reach the apex of the lung directly by microbic diffusion. It is true that in the normal state the last gland belonging to the deep cervical chain is still separated from the pleural dome by the subclavian artery, the brachial plexus, and the loose cellular tissue, but when affected with tubercular lesions this gland is hypertrophied to a great extent; in general, the cold abscess, whether intra- or extra-glandular, is formed there; peri-adenitis follows the attack of adenitis and frequently the glands of the neck even become mingled in a sort of irregular, papillated honeycomb, adhering to the deep-lying portions.

In these cases the infection of the pleura and of the apex of the lung may easily be explained by simple contact, by direct microbic diffusion, without having to resort to the hypothesis of a retrograde progress through the lymphatic channels.

3. By a majority of authors among whom we cite Bazin, Woodhead, Aufrecht, Goerseler Grawitz, von Behring, Weleminsky, Thomson, Pottinger, Hildebrand, Buttersack, von Weimayr, Harbitz and Beckmann, the tubercular infection is said to spread through the lymphatic channels of the cervical glands to the bronchial glands and from there by one route or another to the lungs. Unfortunately, the arguments which they have advanced in this connection seem to be far from convincing. Thus Woodhead, Weleminsky and von Behring, when feeding animals with food containing the tubercle bacilli saw the following glands attacked in this order: the submental glands, the inferior maxillary glands, the cervical glands and finally the bronchial glands. But, as Beitzke has pointed out, these experiments do not in any way exclude the infection of the lung and the bronchial adenopathy following the more usual mode of infection,—infection by inhalation. Beitzke even believes that the infection of the bronchial glands has in reality been brought about by the blood channels, for having injected cultures of Koch's bacilli into the parenchyma of the tongue of a certain number of guinea-pigs, he found at the autopsy, after an interval of from five to eight weeks, tuberculosis of the cervical glands, a light form of pulmonary tuberculosis, with tuberculosis of the pulmonary glands and of the spleen. Now it is difficult to explain this special localization in the spleen if

one admits that the infection of the bronchial glands was brought about through the lymphatic channels, a new proof of the infection of the organism and consequently of the lung and the spleen by the blood-route.

We are, nevertheless, far from denying in an absolute manner, the possibility of tubercular infection of the lungs by the lymphatic channel. As we have previously pointed out, there is nothing opposed to the admission in certain cases, of the possibility of the extension of the tuberculosis of the cervical glands to the bronchial glands, whether by direct microbic diffusion or by retrograde propagation. When the supra-clavicular glands are the seat of tubercular adenitis, the stasis of the lymph in the vessels which empty there evidently favors the transportation of germs by this retrograde route. Similar facts have furthermore been brought to light by von Recklinghausen to explain the retrograde propagation of certain forms of neoplasia by the lymphatic route.

To bring this chapter to a close, let us in addition recall that tuberculosis of the bronchial glands is very common in tubercular children whatever be the principal organ attacked. Thus in the tubercular meningitis of childhood, a primary tuberculosis of the bronchial glands is very frequently found, much less often tuberculosis of the mesenteric glands. (Bertalot, Reimer, Henoch, Demme).

According to Straus tuberculosis of the bronchial glands with children is said to be primary quite often, without concomitant lesions of the lungs. These tubercular lesions would here result from the inhalation of tubercular particles which cross the pulmonary epithelium without producing appreciable lesions there.

As with the cervical glands, so the bronchial glands are said to contain quite frequently, in a latent fashion, tubercle bacilli in subjects who, to all appearances, are quite unaffected by any form of tuberculosis.

It is seen that the problem of the relations existing between the glands and pulmonary tuberculosis is not yet completely elucidated and must await new researches in order to be solved.

(b) *Tuberculosis of other organs.*—What we have just said about the manner in which the germ of tuberculosis penetrates into the systemic circulation enables us to understand its invasion of other organs of the body.

Thus, certain forms of tuberculosis of the kidneys, of the organs of reproduction, of the intestines, of the liver, of the spleen, etc., which appear during intercurrent diseases or even without any known cause, and whose starting point must be sought in the latent glandular focus, may be explained.

(c) *Tuberculosis of the serous membranes*:—It is by a similar mechanism that the tubercular ganglia of the neck may become the starting point for tubercular arthritis, of pleurisy, of peritonitis, of tubercular pericarditis, etc.

We will not here speak of the relations which may exist between certain tubercular lesions of the nose or the naso-pharynx and tubercular meningitis; certain observations however, seem to demonstrate a nasal or naso-pharyngeal port of entry for certain cases of tubercular meningitis. These very interesting relations have been studied at length in the work of Logan Turner; we, therefore, need not pause here.

(d) *Tubercular otitis*:—Tuberculosis affects the ear with comparative frequency. In 45 autopsies on individuals who had died of tuberculosis, Beitzke met with 4 cases of otitis media of a tubercular character. Tubercular otitis is generally of pharyngeal origin; bacilli which arise from the sputum are arrested at the height of the pharyngeal tonsil and penetrate into the tympanic cavity through the Eustachian tube.

Aside from this method of propagation—and it is by far the most frequent one—there are a certain number of cases where the infection may be brought about by the lymphatics; the nose or the naso-pharynx then serves as a portal of entry for the tubercle bacillus.

Finally tubercular infection of the ear may be produced by the vascular route, as we have pointed out in the tuberculosis of other organs. It seems to us sufficient to have pointed out these relations of the lymphatic apparatus of the nose and the naso-pharynx to tuberculosis.

III. RELATION BETWEEN THE NEOPLASIA OF THE LYMPHATIC APPARATUS OF THE NOSE AND THE NASO-PHARYNX AND THE REST OF THE BODY.—It still remains for us to consider summarily the rôle which the lymphatic apparatus of the nose and of nose cavity may play in the evolution and the generalization of certain forms of neoplasia. We must hasten to say that in the vast majority of cases, the tumors of this region originate and develop in that same region without giving rise to glandular infections or to

metastasis. Thus the naso-pharyngeal fibroma may successively invade the various cavities of the face, send prolongations towards the oro-pharynx, towards the zygomatic fossa, penetrate into the orbit, break into the palatine arch, may even reach the brain but it is never accompanied by cervical adenitis. The question is not the same with forms of sarcoma, of epithelioma, and of endothelioma, which reveal themselves by all the characteristics of malignant forms of neoplasia, and which, except in very rare cases, spread rapidly and become general, whether by way of the blood or by way of the lymphatics.

Naso-pharyngeal sarcoma generally originates in the adenoid tissue of the pharyngeal tonsil (Bryk); according to certain authors, however, it may have its origin in the basillar peritoneum.

Naso-pharyngeal epithelioma makes less rapid progress, is less encroaching than sarcoma and may remain limited to one side of the naso-pharynx for some time. The tumor frequently makes its first appearance at the extremity of the Eustachian tube, and its early diagnosis may present certain difficulties. The retro-pharyngeal glands are attacked very early. Sub-maxillary and especially cervical adenopathy (Escat) is thus observed at a much less delayed period than in sarcoma or in endothelioma. This adenopathy frequently constitutes the only symptom which attracts the attention of the patient for a very long time and it therefore assumes a considerable importance from the diagnostic point of view.

As far as the malignant tumors of the nasal fossae and of their accessory cavities are concerned, our personal experience and the reading of the most recent contributions to this subject show us that secondary adenopathy is very rare in these cases whatever the nature of the tumor may be.

When adenopathy does exist, it is said to appear (according to Sebileau) in the sub-maxillary region, chiefly at the height of the angle of the jaw above the expansion of the aponeurosis of the sterno-cleido-mastoid. Nevertheless, it has in some cases been met with in the lateral glands of the neck (Gelle). With Jacques we hold that the tumors of the sinuses bring about a re-percussion on the deep-lying glands of the neck more frequently than it is believed.

The tumors designated under the name of lymphatic endothelioma (the lymph-angio-sarcoma of von Hippel) are very interesting from the point of view of the question with which we

are now concerned. Let us remember that these endotheliomata are produced at the expense of the endothelioma which lines the fissures and the lymphatic vessels. These are met comparatively frequently in the nasal fossae and particularly in the antrum of Highmore. In 22 cases of tumors of the upper maxilla, Hammer found 3 typical cases of endothelioma and 4 tumors which bore a very close resemblance to it. In 1894, Roepke, in a compiled work dedicated to the subject of endothelioma of the nasal fossae, made mention of several cases described in literature. To this he added a personal observation. Since then some other cases have also been published: notably by Martuscelli, Acerbi, Strauss, Althoff.

Endothelioma of the maxillary sinus has likewise been made the subject of some works (Kirschner, Althoff, Hammer, van Duyse). To the cases published we have added three which came under our personal observation and which have been communicated to the Congress of the French Society of Oto-Rhino-Laryngology in 1907.

As with sarcomatous tumors and tumors of the nature of epithelioma, endothelioma of the nose and of the naso-pharynx infiltrates into the surrounding tissues, and finds an outlet into the neighboring cavities. The lymphatic glands are invaded but slowly.

All the malignant tumors of the nose or nasal cavity may produce metastasis. To judge from the data which we were able to collect, these cases of metastasis appear to be very exceptional. The only mode of generalization which here interests us is that which operates through the lymphatic channels. The mechanism of this generalization is in every way similar to the one which we have already pointed out for the generalization of tuberculosis. It is, however, to be remarked: (1) That the lungs generally remain immune though the germs which have entered the circulation of the blood must of necessity pass through this organ; (2) That metastasis shows itself with predilection in certain organs; (3) That certain cases of metastasis can only be understood by admitting with von Recklinghausen a retrograde invasion.

We shall not dwell longer upon this subject in view of the narrow limits assigned to our report. Besides we believe that we have thrown sufficient light on the subject of the role which the lymphatic apparatus of the nose and of the naso-pharynx

plays in pathology, and the intimate relations which exist, from a causal point of view, between this apparatus and a multitude of the affections of the economy. In bringing to discussion this question, such as it appears to develop from the most recent scientific data, we hope that we have not proved all unworthy of the task which the organizing committee of the third international congress of rhino-laryngology has done us the honor to entrust to us.

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**REMARKS ON THE DEMONSTRATION OF A MODEL RE-
CONSTRUCTING THE CANALS OF RIGHT AND LEFT
LABYRINTHS. (PRELIMINARY COMMUNICATION).***

BY E. R. LEWIS, DUBUQUE, IOWA.

A study of the semi-circular canals from the standpoint of their functional conjugations and inter-relations, led me to the construction of a number of models during the past two years, all of which have differed radically from the usual reconstruction in that the grouping together of the vertical canals depends upon a conception of co-response quite different from what was taught at that time. According to the other conception of co-response, horizontal nystagmus depended upon altered activities in the end-organs of the horizontal canals, rotatory nystagmus upon altered activities in the end-organs of the superiors (or anterior vertical canals), vertical nystagmus upon altered activities in the posteriors (or posterior vertical canals); and further according to the other conception, vestibular imbalance depended upon preponderance of impulses from either the right labyrinth or the left labyrinth, the character of the nystagmus (horizontal, rotatory or vertical) depending upon the individual canal or canals constituting the source of the impulses preponderating. Graphic representation of vestibular balance and imbalance was made by drawing a scales in, and out of equilibrium, thus:

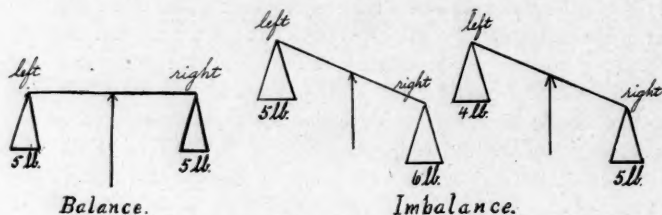
Bearing in mind Ewald's findings concerning the effects of endolymph-movements in the horizontal and superior (or anterior vertical) canals, and with due regard to the anatomic relations between the canals of the right and left sides, the old reconstruction of the horizontals is acceptable, the two conjugated canals (right and left horizontals), lie in the same plane, their utricular orifices are opposed, and extraneous influence of a nature to disturb vestibular equilibrium by affecting both sides simultaneously (such as rotation for example), would always affect right and left horizontal canals equally and oppositely.

Not quite so in the case of the superior canals (or "anterior verticals"). Their reconstruction involves coupling together two canals lying in planes at right angles to each other (in antero-

*Read before the meeting of the Chicago Laryngological and Otological Society, December, 1911.

dextro-oblique and antero-sinistro-oblique planes of the skull); their utricular openings are opposed in a way, though each is 45 degrees off the axis of true diametric opposition. Rotation, however, would not always affect right and left superior canals equally and oppositely; rotation with the right superior canal in "optimum-lage," i. e., exactly within a plane at right angles to the axis of rotation, would find the left superior canal in "pessimum-lage." Still, by rotating with the head in such a position as to bring right and left superior canals (or "anterior verticals") in position midway between "optimum-" and "pessimum-lage," experiments bring results not inconsistent with Ewald's findings.

But how about what we have left, the posterior canals (or "posterior verticals")? Their reconstruction involves coupling together two canals lying in planes at right angles to each other, and their utricular openings are not opposed, but are on the same (pos-



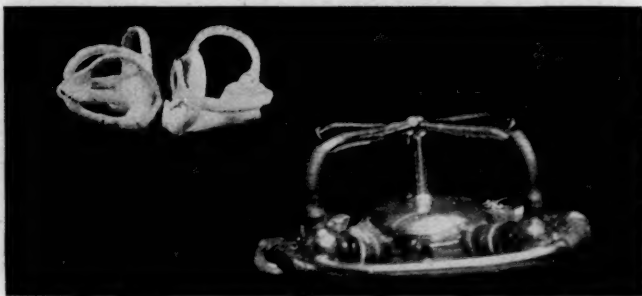
terior) end. Rotation affecting these canals must affect them similarly and not oppositely.

My inclination has been to look upon the vestibular apparatus as the analog of the "universal joint" of machinery, the latter being devised for the transmission of motion in any direction, the vestibular apparatus being devised for the perception of motion in any direction.

The skull holds one, and only one, vestibular apparatus. It happens that its two halves are not in juxtaposition, but it is none the less a single organ. The bone intervening between right and left temporal bones has no connection with the vestibular organ and hence is negligible in this consideration. Let us therefore ignore it and imagine the two halves of the vestibular organ to have been displaced inwards toward one another to a point at which fusion can take place, and we have what is represented in the model herewith presented. The utricles merge into one; the crura communes co-incide—one crus resulting; the non-ampullar ends of the horizon-

tals anastomose; the canals fall naturally into three conjugate pairs, each pair lying within the same plane, each pair with diametrically opposed utricular openings, the arrangement of each canal with relation to its co-respondent consistent and identical. And the apparatus is simply and efficiently devised for universal perception of motion.

It has long been known that rotation with head upright or with head bent forwards or backwards, causes nystagmus; and it has been accepted, in explanation of the nystagmus so caused, that it has been due to the creation of impulse-preponderance in the right or in the left labyrinth, as the case may be. In other words, it is caused by upsetting dextro-sinistral balance in the vestibular apparatus. It has also long been known that rotation with head bent



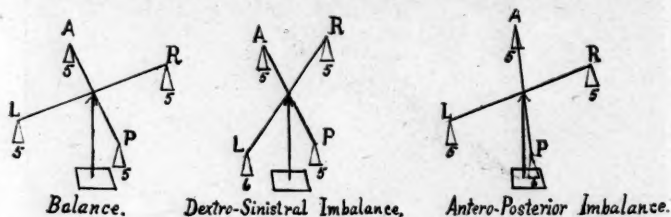
Photograph showing model viewed a posteriori looking straight ahead in the direction of postero-anterior sagittal line of the skull, side-by-side with photograph of right and left labyrinths viewed from same point, just prior to imaginary merging of the two individual labyrinths into the single reconstructed organ. The canals are seen very clearly to lie in the planes indicated on the model, and each pair of canals will be seen to be similarly disposed one to another, as are the integral canals of each pair.

over one shoulder causes vertical nystagmus. Just how vertical nystagmus can be caused by this procedure is not at all clear on the assumption that, in order to cause vestibular nystagmus, dextro-sinistral balance in the vestibular apparatus must be upset. In fact, the production of vertical nystagmus by rotation with the head over shoulder proves conclusively that vestibular equilibrium can be disturbed by upsetting some balance other than dextro-sinistral, for in this experiment both right and left labyrinths are affected similarly and equally by that influence which alone is responsible for the disturbance of vestibular equilibrium.

Only one deduction is possible, namely, that upon antero-posterior balance, just as upon dextro-sinistral balance, depends maintenance of vestibular equilibrium; or that antero-preponderance or postero-preponderance, just as dextro-preponderance or sinistro-preponderance may establish vestibular imbalance.

Instead of representing vestibular balance and imbalance by a scales in or out of equilibrium, as already shown, the situation might be represented graphically by a two-armed scales, one arm in the antero-posterior direction, the other arm in the transverse or right-and-left direction. Equilibrium would be represented by four five-pound weights, one at each end of each arm; one pound added to or taken from any end causes imbalance.*

Horizontal nystagmus occurs in the plane in which lie the two canals whose altered activities are responsible for the nystagmus. From the standpoint of the pull responsible for the slow component,



therefore, this motion of the eye-balls must be looked upon as a simple motion

Rotatory and vertical nystagmus on the other hand, do not occur in the planes in which lie the canals whose altered activities are responsible for the nystagmus, both vertical forms of nystagmus (so-called "rotatory" and "vertical") resulting from a summation of impulses, not from two but from four (vertical) canals. Rotatory nystagmus occurs when both vertical canals of one side ("superior" or "anterior vertical," and "posterior" or "posterior-vertical"), are in similar condition of altered activities ("plus" or "minus"). Ver-

*NOTE:—It will be apparent on closer study of the matter that absolutely correct graphic representation of the conditions of vestibular balance and imbalance involves the construction of a three-armed scales, the first arm in the transverse (or right-and-left) direction of the head, the second arm obliquely forward and outward to the right, 45 degrees off the transverse, the third arm obliquely forward and outward to the left, 45 degrees off the transverse—all three arms lying in the same horizontal plane. Equilibrium would be represented by six five-pound weights, one at each end of each arm; imbalance would be represented by one pound added to or taken from any end (or any two similarly placed ends, as for instance the two anterior ends, or the two laterally placed ends of both oblique arms).

tical nystagmus occurs when both anterior-vertical canals, (right and left), or both posterior-vertical canals, (right and left), are in similar condition of altered activities ("plus" or "minus"). From the standpoint of the pull responsible for the slow component, therefore, these motions of the eye-balls must be looked upon as resultant motions, the slow component in rotatory nystagmus to the left being the resultant of two pulls, one pull obliquely forward and outward to the right in the plane of the antero-dextro-oblique pair of canals, the other pull obliquely backward and outward to the right in the plane of the antero-sinistro-oblique pair of canals; the slow component of vertical nystagmus upwards being the resultant of two pulls, one pull obliquely forward and outward to the right, the other pull obliquely forward and outward to the left.

Reference to the complicating element of voluntary gaze in different types of nystagmus cannot be made in a communication of this brief nature. It will be treated of in a subsequent paper.

In as much as all nystagmus is rotatory, the present terminology seems unfortunate. It would be much clearer to designate nystagmus as "horizontal," "sagittal," and "transverse."

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Further Bronchoscopic Experiences. EMIL MAYER and SIDNEY YANKAUER. *Ztschr. f. Laryngol., Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, 1911.

The author reports the following instances: 1. Removal of walnut from bronchus. 2. Removal of a probably luetic tumor from the bifurcation of a three-year-old patient. 3. Curing of a cough caused by post-diphtheritic tracheal stenosis by introduction of the bronchoscopic tube. 4. Dilatation of tracheal-scleroma by bronchoscopic tubes. 5. Removal of a pin from the bronchus by means of Lister's hook. 6. Removal of a plum-pit from bronchus. 7. Dilatation of a post-diphtheritic stenosis of the trachea; first by Fallmann's frontal sinus probes through the tracheotomy wound, later by bronchoscopic tubes.

GLOGAU.

AFTER-TREATMENT OF THE RADICAL MASTOID OPERATION WITH SPECIAL REFERENCE TO THE SUBJECT OF PACKING.*

BY WENDELL C. PHILLIPS, M. D., NEW YORK.

In another communication,[†] I have given my views regarding the purpose of the radical mastoid operation in the following language: "The purpose of the radical mastoid operation is to convert the external auditory canal, tympanic cavity, aditus ad antrum, mastoid antrum and mastoid cells, when diseased, into one wide-open cavity; to excavate all granulations and diseased bone, to destroy all membranous and muscular tissue lying within these limits, including the membrana tympani, and to effect dermatization throughout the entire area, in the hope that by so doing the ramifications of the disease will be terminated once and for all."

Any discussion of the after-treatment of this operation which requires so extensive a dissection of the most complicated bone in the human body must necessarily be based upon the assumption that the operation itself has been completed in every particular, even to the construction of a suitable meatal flap and the proper closure of the post-auricular wound.

The proper after-treatment of the radical mastoid wound is most essential to the final success of the operation, in fact the surgeon must possess the same measure of knowledge and skill regarding the technic of the post-operative treatment of the resultant wound as for the operation itself, inasmuch as many failures to secure good results are directly due to careless or unskillful post-operative treatment. Hence no otologist should undertake the responsibility of the operative management of a case needing the radical mastoid operation except he be equipped to bestow the required time and skill until the final healing has been secured. The period over which the after-treatment extends usually varies from one to three months.

Whatever opinions may be held regarding the length of time during which the denuded areas in the bone and the external auditory canal shall be packed with gauze, otologists generally agree that at the primary dressing the entire wound-cavity should be

*Read before the Meeting of the American Academy of Ophthalmology and Oto-Laryngology, Indianapolis, September 26, 1911.

closely packed with strip-gauze introduced through the external auditory canal.

Under usual circumstances the primary gauze packing should remain untouched until the fifth or sixth day, when it should be removed and renewed. The external dressing, however, may be renewed daily, a procedure which permits of the inspection of the post-auricular wound and the removal of stitches which may no longer be needed. Furthermore, the daily inspection of the post-auricular wound enables the observer to discover any stitch-infections and to keep the united surfaces clean and dry. Whenever firm union has taken place the stitches should be promptly removed and all stitches which show any sign of local infection should be removed at once.

Whenever the post-auricular wound is healed the further use of heavy gauze pads and bandages should be dispensed with. As a rule, the outer dressings are discarded after about the tenth day. Great care should be exercised during the removal of the primary packing from the osseous wound-cavity in order not to disturb or displace the meatal skin-flaps or the skin-grafts, provided they have been inserted at the primary operation. Furthermore, gentleness during this procedure prevents unnecessary pain; thus tending to safeguard the confidence of the patient. The cut surfaces in the fleshy portions of the wound are exceedingly sensitive and the slightest touch to these areas results in severe pain.

While the removal of the primary packing is a painful procedure, the re-insertion of the second dressing is still more painful. For this reason the dressings may be saturated with sterile vaseline.

Opinions vary regarding the degree of pressure with which the gauze should be packed in the cavity after the first few dressings. Two general views regarding this matter obtain at the present time: (a) Those who prefer very tight packing, and (b) those who do not tampon the cavity at all after the primary dressing is removed, each claiming good results. Between these extreme views all grades of pressure of the gauze packing have their advocates.

During the earlier periods in the history of the radical mastoid operation, the opinion generally prevailed that tight packing was essential throughout for the control of the granulations and to hasten epidermization.

In the writer's experience more favorable results have been obtained when the middle-ear spaces have been snugly packed at each dressing for the reason that he has thereby been enabled to prevent

the osseous wound-cavity from becoming completely blocked with exuberant granulations during the healing-process.

Whatever the after-treatment may be, the object to be obtained is a smooth, firm granulating surface which rapidly invites the spread of epidermis from the skin margins of the wound. At the termination of about two weeks, the posterior or mastoid portion of the osseous wound-cavity should be very lightly packed in order that the deeper areas of the wound may fill in with granulations; for it is obvious that a small resultant cavity in the remote areas is less liable to become fouled with exfoliated epithelium than those of larger calibre.

Considerable experience in testing all methods of after-treatment has convinced the writer that to lessen the calibre of the posterior areas of the wound by permitting the granulations to fill in as rapidly as is consistent with the healthy state of the same is not only without detriment to the final result but is positively advantageous. A daily change of the gauze-packing is advisable, but in many instances, especially in patients who are dependent upon clinic treatment, it is difficult to arrange for the removal of the dressings oftener than once in two days. At each dressing the osseous wound-cavity should be thoroughly inspected and all exuberant and flabby granulations destroyed or removed in order that they may not become a barrier to the invasion of the epidermis from the flap-margins. Excessive secretion should be wiped away inasmuch as by bathing the granulating surfaces the moisture renders them soft and flabby and at the same time tends to macerate the epithelial surfaces. The latter fact is an argument in favor of the daily change in dressings. In other words, the wound-surfaces should be kept as dry as possible. In some instances it may become necessary to apply caustics to unhealthy or exuberant granulations. Strong silver nitrate or ortho-chloro-phenol applications are favored for this purpose.

It is rarely necessary to stimulate granulations, but if so, balsam of Peru may be applied to the sluggish areas or the desired results may be obtained by the temporary substitution of iodoform gauze for the plain gauze. With the diminution of the secretion the surface of the cavity should be covered with boric acid powder or aristol, or a mixture of these, before replacing the tampon.

While the length of time during which it is advisable to continue the packing-treatment of the radical mastoid wound-cavity is a matter of individual opinion and any statement pertaining thereto may become a subject of criticism, it is the opinion of the writer

that said packing should be discontinued as soon as the granulations have become hard and firm and the wound-surfaces have become smooth and comparatively free from secretion. As a rule this occurs during the third or fourth week. The real purpose of the gauze-packing is to protect the freshly denuded surfaces from infection and to aid in controlling excessive and unhealthy granulations. As soon as this mission has been accomplished it is well to dispense with it and to obtain the benefits to be derived from the contact of the air upon the newly-acquired skin surfaces. After dispensing with the packing the further treatment consists in keeping the areas dry by the removal of any retained secretions until epidermization is complete. This period may be prolonged for several weeks, but in favorable cases healing takes place in from five to ten weeks.

A discussion of the post-operative treatment of the radical mastoid wound may not be considered complete without mentioning post-auricular fistulas, facial paralysis and persistent discharge, either from the tympanic orifice of the Eustachian tube or other areas of the osseous cavity.

Post-auricular fistulas are exceedingly rare in cases wherein the primary closure of the wound has been properly performed and in a manner which does not produce strain upon the stitches. The mattress suture or the Michel metal clamp sutures are often of great benefit in relieving the strain upon the approximated edges. Should a post-auricular fistula result, it then becomes necessary to resort to one of the plastic operative procedures which have been devised for this purpose.

Facial paralysis without complete destruction of the nerve trunk requires but little treatment, in fact it seems to recover fully as quickly without treatment as with it. Such remedial measures, however, as tend to stimulate the digestive function and correct faulty nutrition may be employed. For this purpose a moderate use of salines and internal administration of iron, strychnia or iodine compounds are recommended. The Faradic current and massage of the paralyzed muscles have long been advocated as a means for restoring the nerve-function. These measures may be of slight value even in cases wherein the nerve trunk has been severed and may prove of some benefit in preventing muscular atrophy in the more severe cases of complete paralysis. The surgical treatment, the purpose of which is to restore the function of the nerve by grafting its distal end into the trunk of either the hypo-glossal or spinal accessory nerve has proven successful in a limited proportion

of cases. The knowledge that the restoration of function in many cases of severe injury to the facial nerve occurs spontaneously after prolonged periods of time, renders it difficult to decide whether the anastomosis operation should be attempted. In the writer's judgment the operation should never be attempted except when the nerve has been completely severed and the best interest of the patient is often better conserved by delaying the operation than by taking a chance of possible failure in the anastomosis procedure; such failure always results in permanent loss of function in the facial nerve.

Persistent discharge:—The treatment of persistent discharge from the cavity of the wound must be conducted in accordance with the nature and source of such discharge. Whenever the discharge is due to necrosed areas within the tympanic orifice of the Eustachian tube it becomes necessary to curet these areas in a most thorough manner. A similar procedure is necessary when other areas of the osseous wound-cavity are the seat of bone-necroses. While it must be admitted that in certain cases under the most favorable circumstances some discharge may persist indefinitely, in the majority of instances this result is due to unskillful and inefficient operating. The more thorough and radical the removal of the necrosed areas, providing the post-operative treatment is carried out as above described, the less likelihood is there of persistent post-operative otorrhea.

It should be clearly understood that the post-operative treatment herein described refers only to the classical radical mastoid operation. With the post-operative treatment of the so-called modifications of the radical mastoid operation advised by Heath and a few followers in America, the writer has had but little experience. The fact that these modifications are necessarily incomplete, inasmuch as the annular ring, the outer wall of the additus and the ossicles, three of the chief centers of necrosis in this disease, are untouched is sufficient condemnation of these procedures.

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EDITORIAL DEPARTMENT

THE EDITOR'S DESK.

Recent Work in the Interests of the Defective Child.

BY MAX A. GOLDSTEIN

An innovation, recently arranged under the auspices of the Saint Louis Medical Society, has created much favorable comment both from the medical and the lay press, and has proved so successful in its presentation that other communities and organizations may profitably follow this example.

The "DEFECTIVE CHILD" is the subject of a series of symposia arranged by a special committee of the Saint Louis Medical Society at the suggestion of the writer. Three evenings were assigned to this work: I. "The Deaf Child;" II. "The Mentally Defective and Crippled Child;" and III. "The Blind Child."

The following program was presented:

I. THE DEAF CHILD.

The Deaf Child.....Dr. M. A. Goldstein
Demonstration of Cases (By invitation).....Mrs. J. T. Moss (Teacher of Lip-Reading)
Defects Due to Nasal Obstruction.....Dr. W. E. Sauer
Lantern Demonstration of Cases and Pathological Specimens.....Dr. Eugene T. Senseney
Speech Defects; Demonstration.....Dr. C. Armin Gundelach
Discussion opened by Mr. Ben Blewett, Superintendent of Instruction, St. Louis Public Schools.

II. THE MENTALLY DEFECTIVE AND CRIPPLED CHILD.

General Consideration and Classification of Mentally Defective Children.....Dr. Sidney I. Schwab
The State and the Mentally Deficient Child (By invitation).....Mr. Hugh Fullerton (Secretary Juvenile Court of St. Louis)
The Relations of the Crippled Child to the Community from an Orthopedic Standpoint.....Dr. Nathaniel Allison
Special Schools for Crippled Children, with lantern slides demonstrating Children's Work (By invitation).....Miss Julia Stimson (Administrator of Social Service, St. Louis Children's Hospital)
Discussion opened by Mr. Roger Baldwin, Chief Probation Officer, Juvenile Court.

III. THE BLIND CHILD.

Prevention of Blindness.....Dr. M. H. Post
Heredity of Blindness.....Dr. Clarence Loeb
Training of Blind Children (By invitation).....Mr. S. M. Green
Errors of Refraction in School Children.....Dr. John Green, Jr.
Discussion opened by Dr. James Stewart, Superintendent Department of Hygiene, St. Louis Public Schools.

The essayists selected to present this subject-matter were asked to prepare their papers in a popular form, and to eliminate, as much as possible, purely medical technicalities. Special invitations to these meetings were issued not only to the members of the medical society but also to that class of the laity especially interested in child-welfare work and communal pro-

gress. The Superintendent of Public Instruction, the members of the Board of Education, the principals of all the public schools and teachers in the Special Schools of Saint Louis, the officials and members of the various organizations represented in the Child-Welfare Association, the judges and officials of the Juvenile Court, the presidents of Saint Louis, Washington, and Missouri State Universities, the Superintendents of the State Institutions for the Deaf, the Blind, and the Mentally Defectives, and the prominent charity workers and civic representatives were invited to attend these sessions.

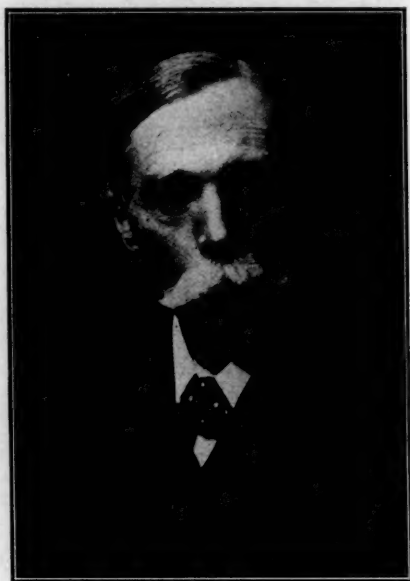
If the thoughts, energies and good-will offered by the several essayists, who have so enthusiastically advanced this program will produce their just reward, another step in the development of this important phase of educational and communal endeavor will have been taken. There seems to be a constantly growing interest in the problems that confront us concerning the care and proper disposal of the defective child. Statistics corroborate the assertion of the tremendous increase in the defects of sight, speech, and hearing, and in the mental and physical infirmities of the American child, and it is not only opportune but vitally imperative that the medical fraternity co-operate with educators, with social and charity workers and with all others of the laity who are beginning to realize the responsibilities of this serious question.

Community, state and nation owe the defective child a serious debt which, as yet, has been but poorly paid. The education of the defective child is an *obligation* and not a *charity*, and the necessity for prompt and effective measures to check the destructive influences that threaten to undermine the health and intelligence of the nation is apparent.

At the last annual meeting of the National Educational Association which has just concluded its session in Saint Louis, and where representatives of all the important educational institutions were active, the question of the education of the defective child, his proper disposal and his segregation, was one of the most prominent topics for discussion. Much of the data and information necessary for an intelligent comprehension of this question by the layman can be furnished only by the medical profession, and we should cheerfully and energetically assume our share of the work to stimulate investigations which will help solve these complicated questions.

IN MEMORIAM.

SIR HENRY TRENTHAM BUTLIN, Bart, D. C. L., LL. D., F. R. C. S., consulting surgeon to St. Bartholomew's Hospital, past President of the British Medical Association and of the Royal College of Surgeons, died at his residence in London on January 24, after a long illness, aged 67.



Henry T. Butlin

The loss of this indefatigable worker will be keenly felt not only in the general profession where his versatility as a general surgeon was long recognized as a compelling influence but also in the laryngological field where his special surgery of malignant diseases and more particularly of malignant diseases of the

larynx and of the tongue have created a new epoch in our specialty.

In 1871, when microscopic pathology was in its infancy, he attained much prominence in the preparation and drawing of morbid tissue, and was soon recognized as an important authority on pathology. In 1880 he was appointed Erasmus Wilson lecturer on pathology at the Royal College of Surgeons. His lectures were published in book-form under the title of "Sarcoma and Carcinoma, Their Pathology, Diagnosis and Treatment." The results of his wide experience and original work in laryngology were embodied in several important publications: "Diseases of the Tongue" (first edition, 1885); "Malignant Diseases of the Larynx;" "The Operative Surgery of Malignant Diseases" (1900).

His surgery of the larynx, especially the brilliant results which he attained in conjunction with Sir Felix Semon in laryngotomy and laryngectomy for incipient cancer of the larynx, mark a distinct and important advance in the disposition of laryngeal carcinoma.

It has been the special privilege of the writer to assist Sir Henry at several laryngectomies and to be thus afforded the unusual opportunity of following more closely the technic of this master-surgeon. At the operating table he was calm, deliberate, and a thorough technician. There was at all times a democracy in his bearing not often found in men who have attained such eminence. He was frank, cordial and modest in manner, simple and direct in speech, a delightful host, a rugged personality and a charming gentleman.

In the death of Sir Henry Butlin the medical profession has lost one of its most valuable, most esteemed and active workers, and the people a benefactor through whose scientific achievement many advances in surgery and laryngology have been developed.

M. A. G.

SOCIETY PROCEEDINGS.
NEW YORK ACADEMY OF MEDICINE.
SECTION ON LARYNGOLOGY AND RHINOLOGY.

Regular Meeting, November 22, 1911.

DR. LEE M. HURD, CHAIRMAN.

Case of Subglottic Stenosis; Shown at Meeting of October 27, 1909. By J. W. GLEITSMANN, M. D.

Dr. Gleitsmann said that he would like to make a brief statement as to the condition of the patient when presented to the section in October, 1909. He had then seen her only twice before, and learned from Dr. Horn, who had attended her previously, that she had developed difficulty in breathing when 12 years old, which increased to such a degree that, at the age of 17, a Russian physician treated her with bougies. She emigrated to the United States in 1903, and had no dyspnea when at rest. The voice was clear, the vocal cords normal, but below the cords in the cricoid region a stenosis formed by two oblong folds could be seen. Polypoid tissue existed at both middle turbinals.

In the discussion following the presentation in 1909, Dr. Emil Mayer suggested the possibility of her ailment being scleroma, as she came from a district where that disease is prevalent, and incrustation was visible in the trachea. Dr. Myles suggested the removal of the polypi first, and then, if necessary, opening the accessory sinus to prevent secretion running down the lower passages.

During the winter he removed the tissue at the middle turbinals, and on two occasions excised parts of the subglottic stenosis—one from the posterior wall, the other below the anterior commissure—both excisions requiring very careful manipulation to avoid injury to the vocal cords, as the upper branch of the excisor curette had to be inserted immediately below the vocal cords. Both specimens were sent to two different microscopists, each of whom reported the growth to be a submucous fibroma.

The patient refused a proposed laryngotomy, and the treatment during the balance of the year consisted in keeping the parts clean and dilating the stenosis at intervals with local applications. To guard against the consequences of a possible engorgement or sudden swelling of the stenotic folds, the patient always carried an emergency admission card to the hospital, which she had been obliged to use the past summer during Dr. Gleitsmann's vacation. At the hospital she was relieved by steam inhalations and other medication. During her stay there a blood examination was made and a decided Wassermann reaction obtained, although no other indications of lues were present. She received two injections of salvarsan, with decided relief after the first injection—the stenosis, which had assumed the aspect of a third glottis by homogeneous hands below the cords, becoming visibly wider and allowing comfortable respiration.

The patient was in this condition when Dr. Gleitsmann submitted the case to be reported by the secretary, but eleven days after her discharge from the hospital she returned to his office complaining of recurring dyspnea. He made the usual dilating applications which he had made many times before in his office, but the treatment was this time followed by extreme dyspnea, threatening suffocation. Intubation was carried out without delay, and the patient was sent to the hospital on November 4. The tube was left in the larynx for five days, and when removed, to his great delight, the stenosis did not return—the subglottic folds remaining separated up to the present time. A third salvarsan injection had been made on the preceding Saturday, and it was hoped that absorption of the infiltration would make further progress.

(NOTE:—Additional remarks. Two days after the meeting, a heavier tube was inserted, which remained *in situ* three days. After extubation the stenosis had still more receded, giving almost normal breathing-space, and a week after the meeting the patient was discharged from the hospital.)

DISCUSSION.

DR. LEDERMAN said that Dr. Gleitsmann was to be congratulated on the results attained in this case. There was no doubt of the effect of the salvarsan treatment. He wished, however, to say a few words about the removal of the intubation tube, as it had

only been in place for so short a time and had acted so happily. He then reported a male case from his service at Lebanon Hospital of atresia of the larynx following typhoid fever. The patient had been tracheotomized and was anxious to get rid of his tube, after having worn it for about two months. He was intubated with a ten-year sized tube, which he wore very nicely and was able to breathe very well, the tracheotomy wound having healed. After wearing this tube for about four weeks, he wished to get rid of it also, and Dr. Lederman attempted to remove it, hoping to replace it with a larger sized tube so as to prevent the return of the stenosis. The patient was placed in a chair and the intubation tube removed. Being very nervous, he started to breathe very rapidly, and before it was possible to reintroduce the tube he became markedly cyanosed, and a tracheotomy had to be performed as he sat in the chair. In a few minutes his condition improved, but he would not permit the re-introduction of the intubation tube.

We must always bear in mind the rapid onset of reactionary swelling in these cases, and be prepared for its appearance.

DR. GLEITSMANN, in closing the discussion, said that the patient's improvement under the salvarsan treatment was very marked and is seldom observed, as such dense folds do not readily yield to any manner of treatment. He was at a loss to explain the severe attack of dyspnea at his office after an application which had frequently been made to the patient before, except by the assumption of a sudden irritation and congestion of the stenotic tissue. It was also unusual that a dense membranous stenosis did not return after extubation, as had happened to a member of the section immediately after extubation of a tube worn for several months.

Case of Columnar Celled Epithelioma of the Antrum, Sixteen Months After Treatment with Radium: No Recurrence. Presented by WOLFF FREUDENTHAL, M. D.

Dr. Freudenthal said that this case was one of a series which he had reported in a paper read before the Triological Society a year ago. The patient was 45 years of age. Two years ago he came to the Manhattan Eye, Ear, and Throat Hospital, where Dr. Harmon Smith saw him and removed polypi from his nose—but soon suspecting a malignant growth, a piece was removed for examination and proved to be columnar celled epi-

thelioma. The patient refused radical operation, and Dr. Smith referred him to Dr. Freudenthal for treatment with radium. Dr. Freudenthal said that he treated the patient for some time, commencing very slowly and leaving the radium in for ten minutes at a time, but it had no effect until he used a very strong radium which was kept in consecutively for three days. After that, the condition improved very much, and finally cleared up entirely. There was still a small piece visible in the nose, but the patient had gained in weight, felt perfectly well, and breathed normally. The case had now remained stationary for sixteen months.

DISCUSSION.

Dr. HARMON SMITH said that upon his first examination he felt that he had to deal with a simple polypus, but upon the second examination the sudden recurrence led him to have a piece removed and examined microscopically, and the report was squamous celled epithelioma and not sarcoma. The finding was so much at variance with the patient's general health, lack of cachexia, and macroscopical appearance that he sent several pieces to the laboratory, and each report was returned with the same diagnosis. Operative measures were refused by the patient, trypsin was tried to no purpose, so the patient was referred to Dr. Freudenthal for treatment with radium. The last time Dr. Smith saw the patient there was a slight projection of the tumor from the antrum. Dr. Smith said that he did not feel as hopeful in regard to the prognosis as did Dr. Freudenthal, for he still believed that the tumor existed in the antrum and that until the patient would consent to the antrum being opened and the inside treated there would be little hope of continued improvement.

Dr. WALTER JOHNSON asked if the radiograph showed a growth in the antral cavity prior to the use of radium, and also if the X-ray now showed the antrum cavity to be reasonably clear, or whether an X-ray picture had been taken.

Dr. FREUDENTHAL said that there was still a small projection of the growth, but that it remained stationary; it had not grown for the last sixteen months. The patient was gaining in health and strength, and thus far he felt very hopeful concerning the ultimate result of the case.

Replying to Dr. Johnson, he said that an X-ray examination had been made and that the case had also been examined by

trans-illumination. He showed a shadow of the right maxillary sinus, though that did not mean anything to him. It might mean that the floor of the antrum was thickened, or it might mean a growth in the cavity. Nothing definite could be said about that, for the man would not allow his antrum to be opened.

Epithelioma of the Larynx Associated with Syphilis. Presented by WOLFF FREUDENTHAL, M. D.

This case was demonstrated to show how difficult the diagnosis of malignant disease of the larynx may be. It was just as difficult to-day as it was twenty-five years ago when a celebrated case was published all over the world. This patient applied to Dr. Freudenthal for treatment on September 2, 1911, complaining of having been hoarse for a year, and of having suffered from dysphagia for the last few weeks. The man was 38 years old, a fish-dealer, and otherwise perfectly well. Dr. Freudenthal said that as soon as he saw the patient's larynx he told the physician who accompanied him that it was undoubtedly a case of lues. The epiglottis was very large, flattened, and on top of it in the center was a typical specific ulcer. It was advised that the patient be put upon anti-luetic treatment, although he denied having ever had any syphilitic infection. The Wassermann test was negative, but this might have been due to the influence of the iodid given. Four weeks later, hearing that the patient was not doing very well, Dr. Freudenthal advised that he come again to the office, and this time the throat presented a typical picture of a malignant growth. There was an irregular mass of tissue which occupied the whole space between the tongue and the epiglottis, and one could not see down into the larynx. Pieces of the growth were removed for examination, and a diagnosis of epithelioma was returned. The patient's breathing was difficult and he said that he could not sleep excepting for a short time on account of the dyspnea. Removal of the larynx was advised, but was refused. It was then advised that he go to a hospital for treatment, in order to have a tracheotomy done if occasion should arise, but this also was refused. The patient was seen again four weeks later, at which time the center of the thickened epiglottis had disappeared. The picture then seen in the larynx was very well shown in the picture made by Dr. Braun, which showed two big masses in the center, a portion eaten away, and the two upper parts still immense. At that

time the condition again suggested lues, but another piece was removed for microscopical diagnosis, and again the diagnosis of epithelioma was made. The tissues, however, were disappearing rapidly, and those gentlemen who saw the patient four weeks before might notice that hardly anything was left of the epiglottis. There was a big swelling near the left arytenoid, but the big masses that formerly occupied the epiglottis were gone. It could be nothing but a mixed infection of lues and epithelioma. The man breathed much easier than before, though even yet there was not very much space for breathing. In Newark he was injected with "606," and was kept under treatment with KI. Dr. Freudenthal said that he would be very glad to have the opinions of those who had seen the case.

DR. CARTER said that he had seen the case four weeks before and regarded it as a case of epithelioma, and observation of the case this evening did not reveal anything to make him change his opinion. He could not regard it as a mixture of epithelioma and syphilis. The dyspneic symptoms seemed to be less now than they had been a month earlier, but this might be attributed to the fact that the growth was breaking down; a certain amount of disintegration had already occurred, giving more space for the passage of air.

DR. BRAUN said that he had first seen the case three or four weeks previously, when he made a picture of it. At that time it was a typical picture of epithelioma. The epiglottis was so immensely enlarged by infiltration that no portion of the interior of the larynx could be seen. Now the picture was entirely different. Most of the epiglottis was gone, and the left vocal cord could be plainly seen. He did not think that epithelioma would act in that way. It must be assumed that it was a mixed infection.

DR. FREUDENTHAL said that the whole history of the case should be taken into consideration. The first time there was a typical looking syphilitic condition on the epiglottis, which broke down. Now the whole epiglottis was gone. That did not occur in epithelioma. If the disease breaks down in a pure case of epithelioma the picture is different from that presented by this case. He adhered to his diagnosis.

DR. CARTER said that the fact that the laryngeal growth had subdivided somewhat under the influence of potassium was no evi-

dence that the case was one of mixed epithelioma and syphilis, for it was a well-known fact that pure malignant growths frequently respond to the administration of the iodides and mixed treatment. Dr. Carter still contended that the growth was a pure epithelioma, and that the diminution in the dyspnea was due to the action of the iodides and the breaking down of the growth.

Case of Post-operative Atresia of the Pharynx. Presented by J. H. ABRAHAM, M. D.

Dr. Abraham said that the patient had twice before been presented to the section—the first time in the spring of 1898. At that time she was suffering from a gummatous infiltration of the post-pharyngeal wall and tonsil, with stenosis. Two years ago she was again presented, after having taken anti-syphilitic remedies, and then showed complete healing with a typical stellate scar. At that time only a filiform probe could be passed, and there was quite a discussion on the case, various methods of operation being suggested. Three weeks ago she came to the clinic for operation, which was performed under local anesthesia, morphine $\frac{1}{4}$ grain, hyoscin $\frac{1}{150}$ grain, hypodermatically, and adrenalin chloride 1-10,000 + $\frac{1}{4}$ of one per cent cocaine. The operation was painless. One great advantage of this method was that there was complete dryness, making the operation very easy in that respect. She was now presented in the post-operative condition, and would be presented later with a full report of the case. Function was beginning to reappear, and she was breathing clearly through the nose, which she had not been able to do for eighteen years. There were still some nasal polypi in the nose. The opening appeared smaller than it really was on account of the resection, but there was a large space laterally.

DR. YANKAUER said that two months before he had operated upon a case of atresia of the pharynx, following a tonsillectomy done four or five years previously by another surgeon. In this case the entire posterior pillar had been cut through and had apparently disappeared, and the palate from the anterior pillar on the right side was adherent to the posterior pharyngeal wall almost across the pharynx to a point halfway between the uvula and the opposite pillar, so that the patient had only a quarter of the normal space to breathe through. The patient was a

very tolerant boy, 14 or 15 years of age, and permitted the operation under local anesthesia. The procedure was very different from the usual methods, and more difficult to describe than to perform. A right-angled knife was inserted between the soft palate and the posterior pharyngeal wall on the left side, and by carrying the knife to the right the entire adhesion was severed as far as the lateral wall of the pharynx. This incision left a triangular wound on the posterior surface of the soft palate. An incision was then made down the lateral wall of the pharynx to a distance about three-quarters of an inch from the lower border of the first wound, and another incision upward from the upper border of the first wound, along the lateral pharyngeal wall in front of the Eustachian eminence. There were then two approximately right-angled flaps, one on the posterior pharyngeal wall, the angle of which pointed upward and outward to the right; and a second, on the posterior surface of the soft palate, the angle pointing downward and outward. The flap on the posterior pharyngeal wall was then dissected up until it was sufficiently freed to be drawn upward into the nasopharynx and stitched to the upper border of the first wound with two silk sutures. The flap on the posterior surface of the soft palate, which could be easily seen when the soft palate was raised with a retractor, was freely movable and could be drawn downward and stitched to the free border of the soft palate with two silk sutures.

The stitches were left *in situ* for five days. There was remarkably little local reaction; the parts healed kindly, and the lumen of the passage was restored to nearly its normal dimensions. The function of the palate was now excellent though it was several months since the operation was performed.

DISCUSSION.

DR. SMITH told of a case similar to that described by Dr. Vankauer, which he had treated in a young girl 12 years of age, who had a complete atresia of the soft palate. The whole of the pharyngeal wall was a mass of cicatricial tissue, and there was apparently no mucous membrane left at all, so that a favorable result could not be expected. With a Leland's knife he went up behind the uvula and with a circular motion cut through the hard fibrous tissue on both sides; he then ran two soft rubber catheters through the nose and out through the mouth, so

that they acted as guy-ropes, pulling the palate forward from the cut surface. These were kept in place for two or three weeks until the whole thing was healed. The girl comes to the clinic now, and has the middle finger passed up behind the palate twice a week. She has a very good breathing space, and apparently there was no contraction. It was a very favorable result, considering the amount of scar-tissue. It was reasonable to suppose, however, that some contraction would take place in the course of time.

Since both he and Dr. Yankauer had seen in the past few months, cicatricial stenoses resulting from traumatism, there must be something too radical in some one's method of operating, and if there are many such cases they should be brought to light and some measure instituted to lessen the number.

DR. GLEITSMANN said that a year ago he had shown before the section two instruments for operating upon atresia of the palate, devised by Dr. Griffin, a member of the section, who had operated upon a number of cases with good results. It was one of the easiest methods of performing this operation.

DR. ABRAHAM, in closing the discussion, drew a diagram and demonstrated the operation. In this case of syphilitic involvement of the pharynx a gumma was present, followed by a stellate scar. In the contraction that ensued, both posterior pillars were brought over toward the median line, making a very narrow space there, as scar tissue is very poorly supplied with blood vessels—and that would hold true to an even greater extent in syphilis. The question of a proper operation was a difficult one. Everything was absolutely adherent, and one could not pass a filiform probe. The question was, what to do? The operation performed was that described by him two years ago; he had never done it, but it was all that appeared to be practicable in this case. He went an inch below the uvula, and made a straight incision across the pharynx with an ordinary straight bistoury. Two vertical incisions were then made, one on the right the other on the left side, down to the straight incision, making a flap. Two sutures were passed through the flap and used as retractors, as advised by Dr. MacKenty. The flap was dissected up with curved scissors and finger. Dr. Abraham said he thought Dr. MacKenty had made a similar incision. In this case, in order to get a sufficient amount of mucous surface to prevent the palate from adhering again he

had to go wide laterally and behind to get a flap, and had to take a small portion of the pillar and tonsil on the left side, and also on the right. He made these two vertical incisions and a straight incision connecting, and dissecting both, carried this flap up and behind. The flap was then inverted posteriorly and carried behind the uvula, so that the mucous surface would rest against the raw posterior surface of the pharynx. Four stitches were carried through the flap and held in place by inserting the silk through hollow shots and then closing the shots, which held them in position. Following this operation, the flap held in place for about two weeks when most of the scar tissue sloughed off, which was expected, but it answered the purpose of preventing the two raw surfaces from coming in contact. The posterior surface of the pharynx was healing over by granulation, and while the pharynx did not look as large as it really was, two fingers could be carried up and swept around. Dr. Abraham said that he hoped to present the case again later.

Dr. MacKENTY asked when Dr. Abraham had reported this operation, and Dr. Abraham replied that he had reported it in November, 1909, when he presented the case. Dr. MacKenty asked if Dr. Abraham had operated on any other case by this method, to which Dr. Abraham answered in the negative.

Dr. MacKenty said that he had never heard of Dr. Abraham's ideas on this operation until the present moment. At two meetings in the past year or year and a half, Dr. MacKenty said that he had presented one patient and read a short description of the operation which he had devised for atresia of the pharynx. The principle of the operation is to take two flaps from the pharyngeal wall below the original palate line and turn them up so as to line the posterior surface of the soft palate which had been previously separated and brought forward from its attachment to the posterior pharyngeal wall. To facilitate this technic, two stitches are passed horizontally under the mucosa of the pharyngeal wall as far below the original palate line as the atresia extends above it. These enter close to the posterior pillar and emerge near the center line of the pharynx. A curved flap is outlined on either side, beginning at the junction of the palate and posterior pillar, curving downward and across beneath the stitches, then up along the center line of the pharynx to the line of the original palate. The stitches are then held as tenaculae while the flap is dissected upward. This dissection is

continued until the palate is entirely freed in all directions. The ends of the stitches are threaded on curved needles. These are inserted into the naso-pharynx and drawn forward through the soft palate above the line of atresia. By pulling on the four ends, the flaps are inverted and brought into contact with the posterior denuded surface of the soft palate. Four shots held them in place.

Dr. MacKenty had reported three cases. All are cured.

DR. ABRAHAM said that he wished to give credit to Dr. MacKenty. He had spoken of Dr. Roe's operation and also of three cases that he had operated on; he had asked him for the details—the method of passing the stitch, which is an ideal one. The retraction obtained is wonderful, and not so many instruments are required.

DR. CARTER said that three years ago he had operated on a case in Dr. Smith's clinic and reported the case before the section. His method was different in this regard: After putting the sutures into the flap, which was dissected up as Dr. Abraham had described, he ran a catheter through each nostril, tied the sutures to these, and pulled them through the nostrils. These were then tied together in front of the septum; this inverted the flap and brought its raw surface in contact with the posterior surface of the soft palate. The result was very good. He had not seen the case within the last year, but had kept in touch with it for eighteen months, and the result was very satisfactory. Dr. MacKenty's method of placing the sutures and using them as retractors was an excellent one. If he had known of that at the time of his operation he would have had less difficulty in dissecting the flap.

Case for Diagnosis. Presented by HAROLD HAYS, M. D.

The patient had come to the clinic a few days previously, having been previously examined for admittance to the militia. At that time there was nothing wrong in the physical examination, but the surgeon noticed that the man had a peculiar voice and referred him to Dr. Hays to ascertain what might be the matter. Immediately upon hearing him speak, the doctor thought that he had a paralysis of the soft palate, probably due to some diphtheritic affection, although he disclaimed having had anything of the kind. On examination, the soft palate was found to work very well; the vocal cords were clear, there was noth-

ing in the naso-pharynx; there was a high arched palate and a very small nose. There seemed to be only one way to account for the condition. The naso-pharynx was unusually large, almost as large as the oral cavity, and it would seem that on account of the size of this naso-pharynx the volume of the sound was not brought forward. A number of the men had seen the case, and any explanation of the condition would be much appreciated.

DR. EAGLETON spoke of a paper published by Dr. Kelly last spring, who reported seventeen cases, dividing them into two classes, one caused by muscular insufficiency, and the other by anatomical abnormality of the hard palate.

DR. FREUDENTHAL said that Dr. Kelly had sent him the article to which Dr. Eagleton had referred. He had had a case of a very much pronounced type, a girl of 15 or 16 years, and had tried everything he could to make the palate move better, but without success. The prognosis in this case in regard to the restoration of the voice was bad.

Case of Multiple Polypus of the Larynx. Presented by JOHN HORN, M. D.

Dr. Horn said that he had seen the patient for the first time that afternoon and had brought him to the section because the condition presented a picture that was well worth seeing. The man was 36 years of age and had suffered from hoarseness for about two years.

Pneumococcus Infections of the Throat. HAROLD HAYS, M. D.

Dr. Hays said that there was very little literature on the subject. The three best papers were by Sir Felix Semon and John Elliott. Dr. Hays said that he had seen five cases which corresponded very closely to those described by Elliott. In three cases slides and cultures showed the pneumococcus. He described these five cases in detail.

The disease usually comes on suddenly with moderate temperature and intense congestion and edema of the throat, together with an inflammation of the anterior cervical chain of glands. The prostration is usually considerable. Swallowing is painful, and the patient attempts to spit out a quantity of thick, tenacious mucus. In a few cases, ulceration of the mucus membrane of the pharyngeal wall, uvula, or pillars of the

fauces may occur. The ulceration is superficial, well circumscribed, covered with a grayish white film, and is surrounded by deeply congested tissue. More than one ulceration may be present. The course of the disease is usually short, terminating by lysis. The mucosa assumes its normal appearance, and even though ulceration has occurred it is so superficial that no scarring is left.

The treatment consists of rest in bed with ice cloths to the neck, catharsis, the administration of anti-pyretics, and the application of silver nitrate. The oral cavity should be kept clean with gargles and lozenges of formaldehyde.

DISCUSSION.

DR. CHAMBERS said that he did not know anything about pneumococcus infection in the throat, but that he did know about it in the ears, and felt convinced that if enzymol had been tried in the case described by Dr. Hays the disease would not have gone on to the mastoid. More than a dozen years ago he had evulsed polyps from a man's middle-turbinate region, and recently this man told him that he had been using enzymol since, with satisfactory results. In cases of pneumococcus of the ear he knew that enzymol would cure, and it ought to be effective in cases of pneumococcus pharyngitis.

DR. LEDERMAN said that he had had some experience with these severe infections of the throat. In one instance the epiglottis was the site involved, the onset being very sudden, with considerable edema. In the case which he had reported elsewhere the infection had caused a deep-seated collection of pus in the region of the epiglottis, with serious symptoms. On deep incision pneumococcus and streptococcus pus was found. A peculiar feature of the case was that the sister of this patient developed a similar condition with sudden invasion, a temperature of 101.5° , and edema of the arytenoid and epiglottidian fold, which disappeared under application of ice and argyrol. Some years ago Sir Felix Semon published a paper in which he stated that all such throat conditions might be classed as septic infections of the throat, which frequently develop very alarming and fatal consequences, especially where the streptococcus predominates. A pneumococcus infection of the throat is not always a simple thing, and a mixed infection of the pharynx or larynx should be considered a serious involvement.

Report of a Case of Laryngeal Cancer, with Remarks. By D. BRYSON DELAVAN, M. D.

Dr. Delavan reported the case of a gentleman who at 62 years of age developed an epithelioma of the epiglottis. The growth was three-sixteenths of an inch in diameter, and was located upon the posterior surface of the epiglottis, adjacent to its margin and about a quarter of an inch from the median line. The lesion itself was circular, with a yellowish center surrounded by a light red ring. The latter ended abruptly at the healthy mucous membrane, the line of demarcation being sharply defined. While the growth of the neoplasm had been very slow, it resisted all efforts at treatment, and the patient was advised to have it excised. This was accomplished without difficulty under local anesthesia and very thoroughly, a little less than one-third of the epiglottis being taken away. Quick recovery followed, the parts soon assumed a healthy appearance, and for nearly eight years the throat remained to all appearance apparently normal.

About a year ago, the patient began to complain of unusual sensations in the left lateral wall of the pharynx, adjacent to the pyriform sinus. The pain was neuralgic in character, and for some time nothing could be found to account for it. By degrees the pain became more annoying, and a slight swelling of the lymphoid tissue near the left side of the base of the epiglottis began to appear. The interior of the larynx seemed to be normal. During the winter, the pain became more severe, and the swelling described extended to the entrance of the esophagus. Late in April several hemorrhages took place from a deep erosion in the swollen lymphoid tissue outside and to the left of the larynx, and just at this time several infected lymph nodes were found under the angle of the left jaw above the pyriform sinus. The general condition of the patient was poor. The patient went to Europe and was operated upon early in September, complete extirpation of the larynx being performed after the method of Gluck.

Recovery from the operation had been good, but the anterior cervical lymph nodes had become involved, and at the time of writing, eight weeks after operation, they appeared to be distinctly involved.

DR. MYLES said that the problems of cancer were now being investigated by the Crocker and various other foundations estab-

lished for that purpose, and the investigators rely much upon physicians and surgeons for their material aid information. It is his firm belief that cases of cancer are curable provided that they are operated upon in the first stage. The difficulties of finding and seeing them in time, however, are many. Most patients demur at the idea of accepting such a diagnosis, and rather beg off, hoping that it may not be true, and wait too long before instituting effective measures. He had reported two cases before the American Laryngological Association. One man had an epithelioma on the vocal cord and refused an external operation, and it was removed intra-laryngeally, March 5, 1901. For nine years afterward he remained apparently well, but there was a recurrence last year and he recently died. He had nine years of freedom after the laryngeal operation. The other case presented one of the most brilliant results he had ever seen. The patient was a man 63 years of age, from whom Dr. Bodine and he had removed part of the tongue, and the cervical glands. The operation was performed early and was very thorough, November 14, 1906. He had lived for almost five years, apparently very well and without any recurrence, but this last summer committed suicide on account of having lost part of his fortune. It seemed to be a case of permanent cure. If we are bold enough to act quickly when we recognize or suspect a case and follow it up early, before it spreads through the system—and the microscopist can usually detect it long before it does—we can cure cancer. Much depends upon the true classification of the tumor in the early stages.

DR. GLEITSMANN said that he had seen the patient several times during Dr. Delavan's absence in Europe. The man had expressed a desire to be relieved of his continuous suffering, and in the speaker's opinion, shared by two eminent colleagues in New York, the case did not appear inoperable, and seemed to offer a fair chance of recovery. The apparently early recurrence of the disease, eight weeks after the operation, seemed not only to justify Dr. Delavan's doubt as to the advisability of laryngectomy in this as well as in other not eminently suitable cases, but it also teaches again the danger of extrinsic location of cancer. So far, we have no sure, steadfast rule when and how to operate, and an honest difference of opinion can exist in a given case. Dr. Delavan has studied the statistics of operations for laryngeal cancer more than any of us, but only a few

operators with large material have published all their cases. In this country, Chevalier Jackson has given a very fair resume of his work in the *Journal of Laryngology and Rhinology*, 1906. He enumerates all his operations and the results, and also the cases he declined to operate upon for reasons given.

DR. ABRAHAM said that during Dr. Delavan's absence he had been called in to see this case, and first saw the patient on the morning of April 23. He was suffering from severe hemorrhage, which seemed to come from the V-shaped depression on the left side of the epiglottis. The hemorrhage was controlled. It seemed that the patient was in the habit of using his toothbrush to depress his tongue, and gave a history that the brush had slipped and touched his larynx. Whether or not that was the cause of the hemorrhage could not be said. Dr. Delavan left the city and turned the patient over to Dr. Abraham for treatment during his absence. Dr. Abraham saw him again in the early part of June, and on June 15 was requested to call Dr. Willy Meyer in consultation. Dr. Meyer examined the patient carefully, strongly advised against any radical interference, and suggested that Dr. Abbe be called in consultation. Dr. Abbe also advised against radical operation, but urged that radium be applied. This was done on June 17, the radium being applied for thirty-five minutes. On June 28 the radium was again applied, this time for an hour and ten minutes. The patient then went to the country. Following the last application of radium, there was a strong reaction; under suitable local applications, he reacted and the larynx returned to what seemed to be a slight improvement. Dr. Abraham said that he saw the patient last on July 27, and then requested him to see Dr. Gleitsmann. That was the history of the case, as he knew it.

DR. DELAVAN said that the case which he had reported spoke for itself. The point that Dr. Myles had raised was contradicted by the history which had just been read. The growth was very favorably located for complete removal, and the diseased area had been carefully destroyed. This, theoretically, should have resulted in cure. Superficial epitheliomata of the skin, for example, are often removed with success and never recur. The growth which the speaker had reported was removed very thoroughly, and it seemed that the care which was taken in this respect ought to have proved the efficacy of the early removal of cancer. Unfortunately, it did not, and there certainly are cases in

which it does not. We may theorize all we please, but the disease recurs. There is no certainty that removal will insure its cure. The case just reported, as he regarded it, tells the whole story of present methods for the treatment of laryngeal cancer. The case as operated on was not a recent case, for it had recurred, and that must have showed a very profound infection. When first seen after recurrence, there was no indication whatever of any disease in the larynx; he could not learn from the gentleman who operated that there was any sign that the interior of the larynx had been the first to be attacked. Evidently it had begun outside the larynx. Every one knows that extrinsic cancer of the larynx is not favorable for operation. It is especially unfavorable when the glands are involved.

There is no doubt that surgically speaking, some operators handle their cases with great skill, but it has yet to be shown that the lives of these patients are prolonged. Every surgeon should tell what becomes of all his cases, and not rest on the display of the successful ones. We operate to save and to prolong life. How much is life prolonged in general by laryngectomy? It seems doubtful if, on the whole, it has been prolonged at all. Dr. Delavan said that he had not referred to the early cases which are amenable to partial operation, but he believed that in most instances the late cases would live longer without operation than with it. The sooner surgeons recognize this fact the better. He had brought up this case to excite discussion, and he hoped that the discussion would continue until we arrived at the truth. At present, we are deceiving ourselves—a bad position for scientific men to be in.

Regular Meeting, December 27, 1911.

Case Presenting Results After Secondary Radical Operation for Frontal Sinusitis. By ROBERT CUNNINGHAM MYLES, M. D.

Miss S. H., applied for treatment with a history of having had several operations on the nasal accessory sinuses. She had suf-

ferred for about five years. An external frontal sinus operation had been performed on the right side in the summer of 1908, and the external wound closed completely. She was free from the severe pain for about two years, during which time there was a discharge from the right nostril. This discharge ceased, and an extensive swelling appeared above and throughout the right orbital region. My assistant, Dr. A. M. Anderson, tried to re-establish drainage through the nose, but was unsuccessful. Then an incision was made near the inner canthus of the eye, and a long, tortuous external fistula formed which would close from time to time, followed by extreme pain and swelling. Not knowing the extent of the previous operation, I determined to expose the cavity and obliterate it by the open method, using the most feasible procedure for securing the best cosmetic results. After making an extensive, curved incision which reached from the middle of the bridge of the nose to the temple, an incision was also made upward through the center of the forehead. The flaps and periosteum were dissected back until complete exposure was obtained of the supra-orbital region and roof of the orbital cavity. The first operator had removed about three-fourths of the floor of the sinus and some of the anterior ethmoidal cells with their orbital walls. There was a firm, solid adhesion, apparently about half an inch in thickness, separating the nose from the extensive cavity which occupied a partitioned frontal sinus and a cup-shaped cavity in the orbital tissues caused by the retained secretions. I used the partition, which was a perpendicular one, very successfully for support as an elbow-shaped Killian bridge. The anterior wall and floor of the external part of the frontal sinus, which extended over the external canthus and external to the partition, was completely removed. Compression was used in the upper parts of the sections of sinuses, and union was secured there by first intention. The lower parts were packed as in the mastoid operation, and the patient is presented with all the evidences of cure.

The case is shown as a type of the unsuccessful first, external operation, the cause—in the writer's opinion—being due to the adhesion of the orbital and ethmoidal tissues to the upper wall of the frontal sinus and the anterior ethmoidal cells near the cribriform plate. Most of the skillful after-treatment was carried out by Dr. Anderson.

Case of Round-celled Sarcoma of the Frontal Sinus: Necrosis of the Floor: Abscess of the Orbit: Killian Operation Combined With the Open Method. Presented by R. C. MYLES, M. D.

Mr. L. consulted me on November 30, 1911, kindly referred by a physician. He gave a history of having consulted a specialist in February, 1911, and stated that at that time he suffered from a yellow catarrhal discharge from the left nostril. An intra-nasal operation was performed, followed by some relief. He suffered from moderate pain in August, and a swelling appeared over the left upper lid, which was attended by very severe pain. Profuse discharge occurred from the left nostril, followed by immediate relief from the pain and swelling. He stated that the swelling and pain occurred regularly about every week. On December 16, 1911, at the New York Polyclinic Hospital, in the presence of several physicians, I made a tentative diagnosis of sarcoma. The patient being put under general anesthesia, the sinus was opened after the curvilinear and perpendicular incisions and retraction of the flaps and periosteum. A large, firm polypoid mass filled the entire sinus and extended down to what was left of the anterior ethmoidal cells. There was a necrotic hole in the floor of the sinus, about twelve millimeters in diameter, connecting with a cystic abscess cavity in the orbital tissue. A complete Killian was performed, removing a part of the anterior ethmoidal cells. The bone was soft in the uppermost part of the sinus and some of the diploic cells were exposed during the necessary curettage. All of the diseased tissue was removed as thoroughly as seemed possible. A part of the curvilinear wound was left open, in order to detect any possible recurrence, and the upper part of the sinus was compressed to secure union by first intention. The patient has been very comfortable, and has not complained of double vision, except a few times at a long distance. I present him eleven days after operation for your criticism, and am encouraged to do so on account of a similar case which I operated upon about four years ago and which to-day seems perfectly well with very little deformity.

N. B.:—Pathologist's report: "The growth from the frontal sinus of M. L. consists of connective tissue, granulation tissue, and small, round-celled sarcoma." (Signed) F. M. JEFFRIES.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

Regular Meeting, April 18, 1911.

C. M. ROBERTSON, M. D., CHAIRMAN.

On the Theory of Vestibular Stimulation. By GEO. E. SHAMBAUGH, M. D.

Dr. Shambaugh demonstrated a number of drawings of anatomical preparations of the crista ampularis. On the basis of his anatomical studies he has endeavored to analyze the physical relations which result in a stimulation of the hair-cells of the crista ampularis. As a result of this study he dissents from the Breuer hypothesis of displacement of the cupula from the impaction of endo-lymph currents. He concludes that the reaction in the cupula from endo-lymph currents is more in the nature of a pressure against the hair-cells than an actual displacement of the cupula. Working from this hypothesis he concludes that only the hair-cells on the side of the crista receiving the impact are stimulated. Furthermore that the rise and fall of intra-labyrinthine pressure associated with each pulsation of the heart must produce pressure of the cupula against the hairs on each side of every crista and thus stimulate all the hair-cells of the various ampullae. In this way he would account for the tonic impulses which apparently emanate from a normal labyrinth. Since the Ewald experiment has demonstrated that a current in one direction produces a greater stimulation than in the other, Dr. Shambaugh concludes that the hair-cells on one side of each crista are more sensitive to stimulation than those on the opposite side. It follows, therefore, that whenever the tonic impulses coming from one labyrinth are unchecked by those coming from the opposite side, the resulting nystagmus will always be directed toward the side from which these impulses emanate for the reason that the stronger impulses come from those cells which direct the nystagmus toward the same side.

Dr. Shambaugh discussed his reason for concluding that the phenomenon of rotation nystagmus must depend upon the continuation of peripheral stimulation, and discussed the mechanism by which he believed this continuation was possible. He points out a number of fundamental objections to the Bárány hypothesis of centers in the cerebellum which control the nystagmus and against

the Breuer hypothesis of displacement of the cupula. Dr. Shambaugh explains by his theory not only all the phenomena of rotation nystagmus but finds a plausible explanation for the after-nystagmus as well as the diminution of the duration of after-nystagmus resulting from long-continued rotation. A full statement of his theory and deductions will appear later.

DISCUSSION.

DR. JACQUES HOLINGER: The criticism Dr. Holinger has to offer on Dr. Shambaugh's theory is of a teleological nature. The crista and the cupula consist of soft tissue. It does not seem rational to put a pressure-gauge, the hairs, between two pillows, the crista and the cupula, since the greater part of the pressure is lost in the soft elasticity of these transmitters. For this purpose, at least one of these, either the crista or the cupula, should be hard.

Dr. Shambaugh speaks of the cupula as having a kind of lever-action, thus increasing the pressure. A lever must be inflexible otherwise it cannot act as a lever, and the cupula is a soft, mushy mass and certainly not fit for such work. Furthermore, a lever-action implies a motion of the cupula, and it is just against this motion that Dr. Shambaugh builds up his theory. Finally it seems to him that the very existence of the cupula is the strongest argument against Dr. Shambaugh's theory. If we wanted to protect the hairs from the pressure of the moving fluid we put just such a soft cap on top of them but if we wanted them to get the full benefit of the pressure we would expose the hairs directly to the impact of the fluid rushing in one direction or the other.

DR. E. R. LEWIS: If I understand Dr. Shambaugh's theory correctly, it is based upon the conception that the hair-cells of the crista ampullaris are endowed with differing stimulus abilities—of greater and of lesser influence according to situation—those nearer the utricle in the crista of the superior canals being of greater influence (or as the Germans say, "hoeherwertig") than those farther from the utricle in the same crista; those nearer the utricle in the crista of the horizontal canals being of lesser influence (or "minderwertig") than those farther from the utricle in the same crista. He also contends that cupular pressure rather than endolymph movement is the immediate source of the ciliary irritation which stimulates the hair-cells. On this understanding I cannot explain certain phenomena which are perfectly explained on the theory of the hair-cells being stimulated by ciliary movement in one direction and depressed by ciliary movement in the opposite

direction. For instance, let us express normal tonus-impulses in equilibrium as $+1$, the impulse value of the "minderwertig" cells of the superior canal crista as $+2$, and the impulse value of the "höherwertig" cells of the same crista as $+3$. If a stream of cold water be allowed to flow into the left external canal while the head is in the upright position, nystagmus to the right will develop. According to Dr. Shambaugh's theory, the "minderwertig" cells should be stimulated in the left superior crista and their impulse value is $+2$ as compared with the tonus impulse value of $+1$. As the right horizontal labyrinth has not been influenced artificially it is apparent that its preponderance can be due to tonus impulses only; hence the cold applied to the left side cannot have stimulated any of the cells, but must have depressed their activity. Equilibrium being purely a relative condition it matters not whether it is upset by adding to the influence of one side or taking from the influence of the other. In this case any additions must have been made to the side which has been influenced artificially. It is apparent by the nystagmus that no additional impulses have emanated from the left side or the nystagmus would have been opposite in direction. We are forced to conclude, therefore, that as the right side has not been stimulated the left side must have been depressed by the use of the cold water.

By conceiving a decussation of nerve-connections similar to that of the optic tract, the geniculate bodies of one side representing the crista, and the retinae representing the vestibulo-ocular centers, it would be possible to account for what actually does happen in response to this experiment, on Dr. Shambaugh's theory. But the conception of any such decussation—distribution of nerve-connections is impossible in the light of what occurs when the anode is applied. The anodal influence is not selective as is the caloric influence, but effects the whole labyrinth simultaneously and similarly. The result of anodal influences applied to the left labyrinth is rotatory nystagmus to the right. Rotation-nystagmus to the right may be caused by selective stimulation of the right superior canal-end organs or by stimulation of the hair-cells of all the canals of the right labyrinth at once. Inasmuch as the right side has not been affected artificially in any way in the application of the anode to the left side, we are compelled to fall back upon the tonus impulses in fixing responsibility for predominance of the right labyrinth. But we cannot accept the theory of decussating nerve-connections as set forth in connection with a possible means of applying Dr. Shambaugh's theory to account for the result of caloric experiment, be-

cause if the effect of the anode is to stimulate the hair-cells in connection with decussating fibers, cells whose impulse value is represented by +2, the same influence must stimulate the hair-cells in connection with non-decussating fibers, cells whose impulse value is +3, and the inevitable result would be preponderance of the left side and nystagmus to the left. Inasmuch as nystagmus to the right develops, it seems to Dr. Lewis that one is forced to conclude it is due to depression of influence of the hair-cells of the influenced left labyrinth, according to the older theory based upon the works of von Stein, Hoegyls, Ewald, Barany, Neumann, Alexander and their school.

As regards Dr. Shambaugh's contention that cupular pressure upon the utriceward side or upon the canalward side of the crista, rather than endo-lymph movement away from or toward the utricle, is the immediate source of the irritation of the cilia, which results in stimulation of the hair-cells, it seems to Dr. Lewis an unimportant distinction without a difference to conceive the stimulation of the hair-cells of the crista to be the result of pressure by the cupula rather than by endo-lymph currents; in either case the important thing is the same, namely, that the source of the force affecting the change of ciliary position, be it by cupula pressure or by endo-lymph current, determines the nature of the impulse changes in that labyrinth, a force exerted toward the utricle upsetting vestibular equilibrium in one way, a force exerted away from the utricle upsetting equilibrium the other way.

DR. SHAMBAUGH (in closing) said that he fails to gather from Dr. Lewis' remarks any serious argument against the hypothesis which he has advanced. His discussion regarding caloric stimulation is hardly to the point since the idea has long been discarded that the phenomenon resulting from the injection of cold water into the ear is caused by a depression rather than by a stimulation of that ear. Dr. Lewis seems to imagine that a study of the minute anatomical relations in the crista amounts to merely a quibble. A correct conception of the anatomical structures is fundamental in formulating any theory of vestibular stimulation.

As regards the phenomenon of equilibrium and caloric and electric stimulation, for which Dr. Lewis seems to have so much difficulty in accounting, Dr. Shambaugh believes these are more readily explained by this theory than by the old hypothesis.

Dr. Holinger seems to think that it is not reasonable to account for the stimulation of the hair-cells by a pressure of the cupula against the hairs, since both the crista and the cupula are soft struc-

tures. Dr. Shambaugh cannot take the objection seriously, since he is willing to admit that the slightest impact of the cupula against the hairs is sufficient to stimulate the cells. Dr. Holinger inquires what the object of the cupula is since the endo-lymph currents could just as easily affect the hairs if there were no cupula. Dr. Shambaugh replied that whether we can imagine a way by which the hair-cells might be stimulated in the absence of a cupula has no direct bearing on the problem. The fact remains that the cupula exists and in some way acts as the medium of transferring impulses from the endo-lymph to the hairs of the hair-cells. Dr. Shambaugh can see how this pressure of the cupula against the hair-cells from the impaction of endo-lymph currents might be increased by the larger surface which the projecting cupula presents for the reception of impaction of endo-lymph currents.

Regular Meeting, May 16, 1911.

Case of Labyrinthine Fistula in the Presence of a Long-standing Destruction of the Opposite Labyrinth. GEORGE E. SHAMBAUGH, M. D.

The case was a man aged 24 years, who had discharging ears since childhood. The right ear had been the seat of a cholesteatoma with acute mastoiditis for which several operations had been performed five years ago by a general surgeon. A radical mastoid cleared up the disease in the right ear. There appears to be no vestige of function left in the right ear. The tuning-forks are lateralized to the left side in the Weber. Caloric responses were absolutely negative for the right ear, although the current passed directly into the large opening left by the radical mastoid. For periods lasting over a number of days the patient experiences a pulsating tinnitus in the left ear with a marked diminution in the hearing and associated with marked disturbance of equilibrium and occasional nausea. The handle of the hammer is still present, attached to the promontory. In front of this a large opening leads to the attic and posterior an opening toward the antrum. He still hears the conversational voice fairly well in his ear. There is a spontan-

cous rotary nystagmus to the left. The caloric tests show the characteristic responses. A distinct fine rotary nystagmus to the right on irrigating with cold water, a coarser rotary nystagmus to the left irrigating with hot water. On rotation the horizontal after-nystagmus to the left is much more pronounced than the after-nystagmus to the right, although the latter is quite distinct but of short duration. Compression of air in the left external meatus produces a very coarse horizontal nystagmus to the left (affected ear). Suction produces a finer horizontal nystagmus to the right.

This case is of special interest because it permits one to perform the classical Ewald experiment on the human ear and study the reaction thus obtained, independent of any influences from the opposite side. The case demonstrates very clearly the fallacy of the hypothesis that the stimulation of an ear will always produce a nystagmus directed towards that side, and the idea that the reason why certain manipulations of an ear produces nystagmus towards the opposite side, is because these manipulations depress the affected ear and permit the tonic impulses from the opposite side to direct the nystagmus towards that side. In this case we have no impulses from the opposite side, as this has been long since dead; yet in the caloric tests, in the rotation tests and in the suction in the external meatus we can direct nystagmus to the opposite side. A case with clearly marked fistula symptoms such as this one disproves very positively both the Breuer theory of nystagmus and the Barany theory. In Breuer's theory he assumes that the continuation of the nystagmus which occurs in the rotation test is occasioned by the continuation of peripheral stimulation. The momentary impaction of endo-lymph displaces the cupula to one side or to the other, the stimulation of the hair-cells continuing until the cupula has been dragged back into its normal position. In a fistula case such as this we produce a current in the endo-lymph resulting in nystagmus, but the nystagmus ceases immediately upon the cessation of the compression, showing that the displacement of the cupula is not what takes place. Barany places the phenomenon of nystagmus in centers in the cerebellum, which are set off by impulses arising from a momentary impact of the endo-lymph against the crista. The nystagmus lasts until the energy stored up in these centers has been expended. If this theory were true an explosion of these centers by compression of air in the external meatus in cases of fistula would necessarily produce nystagmus lasting for some time. This is not the case; nystagmus in this case ceases immediately upon the cessation of the compression.

**Examination of the Functions of the Ear in Reference to the
Diagnosis of Tumors of the Cerebellar Pontine Angle.** By
J. HOLINGER, M. D.

The question of an early operation on tumors of the cerebellar pontine angle depends entirely upon our ability to make an early diagnosis. Many of these patients come first into our offices with general complaints of one-sided hard-hearing, noise and dizziness. The diagnosis is shown in four cases. The first one was a patient with all the symptoms well developed. Hearing for loud shouting only; vision of fingers only, but otherwise no paralysis; no other symptoms. Several months later the diagnosis was confirmed by operation. In the second case the diagnosis was made nine months before other symptoms, especially the eye-symptoms, appeared, and nearly a year before it was confirmed by operation. The third case was a case of gumma, which showed the same characteristic functional ear-symptoms combined with eye-symptoms. The patient was promptly cured with Hg. and KI. The fourth case is still under treatment.

The diagnosis is based on the appearance and the occurrence of increasing deafness, dizziness, noise, lasting several weeks or months in one ear only, combined with normal appearance of the drum membrane and a free Eustachian tube. Hearing by bone-conduction is much more impaired than hearing by air-conduction. An a^1 or A tuning-fork on the mastoid of the affected side or on the vertex is mainly or exclusively heard in the good ear. Hearing of the lowest sounds is less affected than hearing of the highest sounds. The caloric test does not give any characteristic reaction. However, walking and hopping forward and backwards with eyes closed usually gives hints in one way or another.

The tumors of the cerebellar pontine angle are evidently much more frequent than Benninghaus in his text-book of 1908 asserts, when he says that only forty cases were recorded up to date. In Chicago alone in a very few years six cases were observed.

DISCUSSION.

DR. ALFRED MURRAY: In Dr. Holinger's second case he mentions the fact that the patient served in the Danish navy, and had his left ear turned toward the gun in firing. There is another factor in the case which might account for a possible traumatic origin of the deafness. About twenty years ago the patient received a blow upon his left occiput by a swinging boom on board ship, which rendered him unconscious for several hours. How much influence

this could have had is of course problematical: I mention it merely as a fact in the history. The discovery of his deafness came about in an interesting manner. The patient was accustomed to placing the receiver of the telephone to his right ear, but upon one occasion, being obliged to use his right hand for writing, he transferred the receiver to his left ear and found that he was unable to hear. This was the first intimation he had that the left ear was deaf. The deafness must have been of very gradual development, for he is a man of more than average intelligence and certainly would have noticed a rapid impairment of hearing.

This patient consulted Dr. Holinger nine months before his first visit to me. At that time an ophthalmoscopic examination showed no edema of the nerve-heads. His vision began to get cloudy at this time, but this was shown to be due to presbyopia, as the patient was then 44 years old, and the condition was corrected by lenses. There was also no edema of the nerve-heads during the summer following, that is, the summer of 1909, the patient having been then examined by an oculist in Valparaiso, Indiana.

He consulted me at the suggestion of Dr. McMichael, on December 17, 1909, on account of failure in his vision, which at that time was found to be 20-40 in both eyes, and could not be improved by glasses. Ophthalmoscopic examination showed bilateral choked disc, the right disc being elevated about 4 D. and the left 1 D. On December 22, 1909, the perimeter showed slight irregular contraction of the right field and a practically normal left field.

Suspecting the possibility of a specific cause for the condition, I ordered large ascending doses of KI and mercurial inunctions. Four weeks of this treatment seemed to produce no improvement and it was therefore discontinued.

On January 3, 1910, the amount of edema was about equal in both eyes, viz, 4 D. By January 10, 1910, the vision of both eyes had begun to get very cloudy, and on January 17, or one month after the patient's first visit to me, there appeared an absolute central scotoma in the right eye, extending out 15 or 20 degrees from the point of fixation. Dr. D'Orsay Hecht was then called in consultation and diagnosed the condition as tumor of the left cerebello-pontine angle, and advised operation. There was present at this time a decided tendency to fall to the left side when closing the eyes; also a numbness around the left angle of the mouth, and on the left anterior third of the tongue. The reflexes were slightly exaggerated on the left side of the body.

It might be stated here that two of the symptoms so constantly present in brain tumors, namely headache and vomiting, were practically absent throughout the course. The patient had a dull ache back of the left ear, as he expressed it, but at no time was it severe enough to require an opiate. Vomiting was present during the time K I was being administered, but ceased upon its withdrawal.

January 12, 1910, or five weeks from the time the patient first consulted me, the right eye was practically blind, the vision of the left eye was rapidly failing, and the left field showed beginning contraction. Five days later Dr. Halstead did a decompression, removing a large portion of the occipital bone, finding it to have undergone considerable pressure-absorption on the left side; the dura of that side was bulging as if under much pressure, and was coursed by many dilated vessels. No effort was made at this time to remove the supposed tumor. One week later, however, a second operation was performed, at which time Dr. Halstead found a cyst located at the left cerebello-pontine angle, from which he evacuated 3 or 4 oz. of thin serous fluid, and curetted the walls. The cyst being incorporated in the cerebellar tissue no effort was made to remove it.

Four days after the second operation there was marked reduction in the edema of the discs, the outlines of which were, however, not yet visible. There were numerous points of exudate and a few hemorrhagic spots around the discs. A few days later the right disc became visible and showed atrophy of the optic nerve; the retinal vessels were contracted. The left disc has never become entirely clear, being covered apparently by unabsorbed exudate.

On July 7, 1910, or five months after operation, the vision with proper correction was: R 20-30; L 20-20. This acuity of vision had not been materially lessened at the time of the patient's last visit to me on February 21, 1911, or over a year after operation.

The first field of vision following operative interference was taken two weeks after the second operation. This was very superficially done, owing to the weakened and irritable condition of the patient, but is sufficiently accurate to be depended upon. It shows slight concentric contraction and a relative central scotoma in the right, and a practically normal white field in the left.

The field of vision taken July 7, 1910, or about five months after operation, shows a condition approaching very nearly the normal, except for a peri-central scotoma in the right field and inversion of colors in both fields.

The last field of vision, taken on February 21, 1911, or more than a year after operation, does not differ materially from that taken seven months before, except in one or two particulars: principally interlacing of color fields. This calls to my mind a very interesting feature of the case. Interlacing and inversion of the color fields is not of uncommon occurrence preceding operative interference, but in this case, strange to say, these phenomena did not develop until several months after operation, and could not then be accounted for by a return of pressure, for there are, even now, absolutely no symptoms indicative of a relapse.

In this very interesting case the patient was doomed not only to total blindness, which was rapidly approaching, but also to certain death; whereas now, one year after operation, his vision, with appropriate lenses, is almost normal. He is able to take active part in public life, and carry on his business affairs practically as well as ever before. His chief incapacity is in doing any heavy lifting or hard physical labor. There is a moderate hernia cerebri, but the patient does not find it necessary to wear any protection. The impression gained from his general appearance and from conversation with him, is that he is a perfectly healthy man, physically and mentally.

The case brings out a number of valuable points in diagnosis from the standpoint of the aurist, neurologist and ophthalmologist, and shows the brilliant results which can be obtained through operative interference.

DR. GEO. E. SHAMBAUGH: Dr. Shambaugh does not think Dr. Holinger made it quite clear regarding the loss of bone-conduction in cases of unilateral tumors. As long as the opposite ear is normal the difference in bone-conduction from one part of the head or another is very slight, and usually one can hardly speak of a diminution of bone-conduction in unilateral nerve deafness. Dr. Shambaugh recalls a case reported to the American Otological Society several years ago where there was nerve-deafness, and the Weber lateralized distinctly to the affected ear, and where the post-mortem disclosed tumor in the internal meatus.

The Relations of the Internal Carotids and Optic Commissure to the Pituitary Body. By O. H. MACLAY, M. D.

Published in full in the Sept., 1911, issue of THE LARYNGOSCOPE, p. 956.

DISCUSSION.

DR. GEO. E. SHAMBAUGH: This careful anatomical work by Dr. Maclay on the relations about the sphenoidal sinuses is very timely.

The interest of the profession towards tumors of the hypophysis and the fact that the intra-nasal route for the removal of these tumors is a feasible one, is going to result in a great many operations undertaken through the nose upon the sphenoidal sinuses. It is extremely improbable that everyone that undertakes this work will have the anatomical facts which Dr. Maclay has brought out clearly in mind. It seems extremely desirable in the narrow confines that one should always perforate the roof of the sphenoidal sinuses as near the median line as possible. It would seem that a good deal of difficulty would be experienced in knowing when one is working on the median line. The septum is not a reliable landmark. In my preparations the sphenoidal sinuses show greater variations in the relative size of the two sides than any other of the nasal sinuses, and this difference is usually the result of a septum displaced laterally.

DR. HOLINGER: Dr. Maclay certainly obtained valuable data in studying the normal anatomy of the sella turcica, but a pathological anatomy would be of still greater value for the operation of the tumors of the hypophysis. The important question is, do any of these tumors occur in the shallow variety of the saddle and in which direction do such tumors grow? Or do the tumors only occur in deep saddles and do they mostly grow downward, thus encroaching upon the sphenoidal sinus, making the operation from the nose so much easier and less dangerous. A comparison of the X-ray pictures of the different cases so far reported would answer these questions.

DR. GEORGE McBEAN: Dr. McBean was asked to speak of two cases that had been under his case. The first was a spontaneous hemorrhage from the right sphenoidal sinus in a young woman who had had no previous nasal treatment. The bleeding was so profuse that Dr. McBean was unable to locate its source except that it was in the upper back part of the nose. He packed the nose after Freer's method, but was unable to control all the bleeding. They finally exposed both internal carotids, but pressure on neither one controlled the hemorrhage, and they did not dare to compress both. The patient finally died and the autopsy showed necrosis of the external lateral wall of the right sphenoidal sinus and rupture of the internal carotid artery.

The second case is one of tumor of the hypophysis cerebri in a young woman who came to Dr. McBean a year ago complaining of diplopia and beginning failure of vision. He found trouble in the

right sphenoidal sinus; so removed the middle turbinal and opened the sinus. He found it packed with a mass resembling polypoid tissue. He curetted out as much tissue as possible and the diplopia and vision improved in a few days. The sinus appeared excessively deep and rapidly refilled with tissue.

Dr. Shambaugh saw her at this time with Dr. McBean, but further operation was refused because the diplopia and beginning failure of vision for which she first consulted Dr. McBean had improved, although she had bilateral papillitis. She left the city in June and did not return until February, 1911. By this time her vision had failed so far that her family consented to further operation. Dr. McBean had skiagrams made by Drs. Reichman and Oliver, and they both show a very greatly enlarged sella turcica. Dr. Grinker also saw the patient with Dr. McBean and corroborated the diagnosis of a growth in the region of the hypophysis with extension into the sphenoidal sinus, as Dr. Pierce so beautifully showed in his plates at the meeting two months ago. Dr. McBean sent the patient to Dr. Harvey Cushing, who operated by the sub-labial trans-septal route on April 20. She made an uneventful recovery, but the vision is very poor. The disc is choked in both eyes and there is also primary optic atrophy; so much improvement is not expected.

Demonstration of Microscopic Slides. By N. H. PIERCE, M. D.

1. Fibroma of the naso-pharynx.
2. Tumor from the region of the sphenoid. (Doubtful diagnosis.)

Tumors of Nasal Cavities. -By LORENZO GROSVENOR, M. D.

Regular Meeting, November 21, 1911.

Demonstration of Pathological Specimen Showing Disease of Petrous Temporal Subsequent to Otitis Media, With a Note in Regard to the Etiology of Such Conditions. By E. GORDON WILSON, M. D.

M. L., aged 7, was under observation for more than two years on account of a congenital heart lesion. During this time she had discharge from the right ear. There is no record of pain in or about the ear. Measles developed on April 8, 1911. The attack was moderately severe and ran the usual course. The

aural discharge became more profuse, and on April 17, there was hemorrhage from the right ear, estimated at ten ounces. From that time there was constant oozing, and on April 19, a second and worse hemorrhage occurred, estimated at twenty-four ounces. The patient now fell into a semi-conscious condition and died April 21, 1911. (Dr. Wilson is indebted to Dr. Walls for these notes and to Prof. Zeit for the post-mortem material.)

Post-mortem: The skin over the entire face was normal, neither swollen nor discolored. There were blood-clots in the external and middle meatus extending between the cartilaginous external meatus and the tympanic bone into the upper part of the right parotid gland. When these were removed there was found to be a large abscess-cavity lying on the under surface of the petrous bone. The whole inferior border of the petrous bone medial posterior to the temporal maxillary joint, including the glasserian fissure was bare. The joint itself was intact. On removing the skin over the parotid, the posterior part of the glenoid fossa was found to be denuded of periosteum, the sharp inferior edge of the petrous was also bare and the finger could be passed into the abscess-cavity as far as the apex of the petrous temporal bone. A probe could be passed along the under surface of the petrous bone into the upper postero-lateral part of the naso-pharynx anterior to the posterior vertebral fascia. The retro-pharyngeal glands were very large and there was pus in the naso-pharynx. The hemorrhage had extended into the upper mesial part of the parotid gland, the anterior and inferior parts of the gland were normal. The hemorrhage appeared to have come from a branch of the internal maxillary artery.

On examining the interior of the skull, the dura was perfectly normal. Both lateral sinuses were normal also the cavernous sinus. The right superior petrosal sinus, toward the apex of the petrous bone, contained a partly adherent blood-clot. The dura over the apex of the right petrous bone, in relation to the ganglion of the fifth nerve, was thickened and more adherent than on the left side; there appeared to be a small area of localized inflammation at this point. The opening into the carotid canal in the right petrous bone was much more patent than on the left side. The osseous apex of the petrous showed no necrosis. The internal auditory meatus was normal.

The sequence appears to be: (1) Suppuration in ear. (2) Inflammation of the tympanic and petrous bones with periostitis and sub-periosteal abscess. (3) Rupture into the pharynx. (4) Localized abscess in upper part of parotid gland, rupturing into external meatus between the cartilaginous and bony meatus.

NOTE: To demonstrate how easy involvement of the parotid can occur in such cases, Dr. Wilson showed a normal parotid capsule, the gland having been removed. One notes that at the external auditory meatus the sheath fuses with the perichondrium and periosteum of the external auditory meatus and so there is formed a relatively strong partition extending back to the petrous bone. The weak spot in this union is where the perichondrium and periosteum come together, and here it is where communication between parotid abscess and the external auditory canal occur. The weakest part of the capsule is medial, but here it blends more or less with the lateral aponeurosis of the pharynx.

Cases of Pastic Surgery. By JOSEPH C. BECK, M. D.

To be published in full in the June issue of THE LARYNGOSCOPE.

Dr. Beck presented cases of plastic surgery of the head and neck in the various stages of development, some before operation, some after one or more operations having been performed, and some completed. The following cases were briefly demonstrated and will be more fully described and illustrated when published: Case 1. Complete cleft-palate and hare-lip; case 2, Posterior cleft-palate only; case 3, Anterior cleft-palate and hare-lip; case 4, Anterior and posterior cleft-palate, but without the hare-lip; case 5, short and immovable soft palate; case 6, Collapse of the anterior portion of the nose; due to absence of the triangular cartilage; case 7, Collapse of the anterior part of the nose, due to lues; case 8, Unilateral absence of the ala due to electric burn; case 9, Absence of the pinna, due to epithelioma (post-operative); case 10, Same as case 9; case 11, Retro-auricular fistula—post-mastoid operation; case 12, Neuroplasty for the cure of facial paralysis due to acute suppurative labyrinthitis; case 13, Destruction of the side of the face due to epithelioma (post operative); case 14, Rhino-phoma.

DISCUSSION.

DR. OTTO J. STEIN stated that the great variety of cases shown here to-night offered a wide field for discussion. The subject

of plastic surgery, or reconstructive surgery, is, of course, a vast one and offers a tremendous field for our ingenuity. It is one of special surgery and he thinks Dr. Beck has certainly been fortunate in having this large amount of material to work upon and that his results are certainly excellent as far as one can determine at such a distance. It is rather difficult to form any opinion as to these cases in as cursory a manner as seen here to-night. He has seen considerable of Dr. Beck's work, some of the cases before operation, others after Dr. Beck has operated. Dr. Stein himself has little to say on this subject from a personal standpoint. He has done very little plastic surgery, merely work on the nose, mouth and cleft palate, and intra-nasal work and some around the ear, reconstructing the auricle and making parts of noses, but he has not gone into the subject as extensively as Dr. Beck. Plastic surgery, or reconstructive surgery, as it is frequently termed, has received a new impetus in recent years and has itself been made a specialty. John B. Roberts of Philadelphia, who visited the Chicago Medical Society some time ago, in discussing this subject, showed what a vast field had been opened up by the ingenuity of the surgeon.

It certainly has been demonstrated that all kinds of tissue can be transplanted and even organs have been transplanted, not only from the same individual and from one part of the body to another, but from one individual or animal to another. Carrel has shown that after putting the carotid of a dog in cold storage for three weeks it can be transplanted to another animal and grown alive there. This shows the tremendous advance that has been made in this line of work. Although, as we know, this work dates back to the Indian period, the art has been lost until recent years, and it requires a knowledge and persistency, such as are possessed by Drs. Roberts and Beck, to bring out the wonderful possibilities this class of surgery possesses.

Dr. Stein would like to ask Dr. Beck what his views are upon the utilization of the Brophy method in cleft-palate work as compared to the method used by Brown. He realizes that it is difficult for Dr. Beck to enter into the details of this work in presenting his cases but as the Brophy method has been lauded and used with great success by Dr. Brophy, Dr. Stein would like to know from Dr. Beck's experience what his opinion is as to the selective value of these two different methods of operating.

DR. A. M. CORWIN said that the Chicago Laryngological Society ought to be proud of Dr. Beck and his work. While this is a distinct department of laryngology involving work that has usually been turned over to the general surgeon, or rather not done at all, he supposed not over one per cent, or a half of one per cent of laryngologists will ever enter this special field. Dr. Beck needs no encouragement from this body because his own enthusiasm, his own ambition and his own mechanical genius—it takes all three of these to do this work—have led him far in advance of anything that has been done in this city, so far as Dr. Corwin knows, and the Society simply wished to commend him.

The most interesting case exhibited that evening seemed to Dr. Corwin to be the case in which the skin had been, as he understood, made to serve the purpose of the mucous membrane of the rejuvenated larynx, and that is a very important thing. There are several cases in the Cook County Hospital along this particular line which Dr. Corwin will take pleasure in referring to Dr. Beck.

DR. BECK, in closing, stated that in answering Dr. Stein's question regarding the Brophy method, he wished to say that his experience with this method had been very good. There is no one method that can be applied to every case. Every case must be treated individually, and frequently several methods must be employed in one case. In the baby Dr. Beck presented he was able to pass the wire through and draw it across the front instead of drawing it right through and employing plates like Dr. Brophy recommends—not sticking to the point as laid down. Then again it makes a difference, of course, as to the age of the child. In the new-born, Brophy's method is by far the best, but not carried to the full limit. Dr. Beck believes that many fail with this method because they try to do the complete operation at one sitting. For a man who has done as much work as Brophy has, he thinks it is a question of personal ability, and he frequently does the complete operation at one sitting.

Dr. Beck brought this material to the meeting to stimulate work in this field. This material is running around everywhere and they must pick it up. As a rule, men in this specialty of laryngology pass it by. By doing this it is driven into the hands of men who have not the ability to handle the delicate tissues as the laryngologist is able to do. Most of these cases are com-

bined with interior work in the nose, mouth, throat, and this work surely belongs to oto-laryngologists. The sooner they take it up the sooner it will be a part of oto-laryngology.

Replying to Dr. Robertson Dr. Beck states that he has injected the case referred to, twice since the original operation, but the paraffin has become displaced. That is the one trouble in this case. The act of swallowing displaces the paraffin and it finally becomes a foreign body, which is troublesome. Dr. Beck warns against injecting too much of it. This woman is now able to make herself understood; formally she could not do so.

There are many points in connection with these cases which Dr. Beck did not have the time to bring out, but he will publish them in detail in the very near future, illustrating them by means of stereo-photographs, a method strongly recommended.

Treatment of Foreign Bodies in the Esophagus. By E. FLETCHER INGALS, M. D.

(Original contribution to THE LARYNGOSCOPE, p. 47, Jan., 1912.)

Some Esophageal Cases. By STANTON A. FRIEDBERG, M. D.

(Original contribution to THE LARYNGOSCOPE, p. 58, Jan., 1912.)

DISCUSSION.

DR. H. STOLTE states that the society feel greatly indebted to Dr. Ingals for his excellent paper and they regret that these papers are usually not published in journals which are read by the general practitioner. The general practitioner is the man who usually sees the case first, and although esophagoscöpy has now been practiced for nearly twenty years, most general practitioners know nothing about it. For that reason they try methods which are absolutely unjustified. They work in the dark, with instruments which are not at all fitted for the purpose, without considering the shape of the foreign body. In this way they lacerate the esophagus, and so it happens that when the case comes to the man who does the work, he gets it in a most undesirable condition—in a septic, highly inflamed condition, so that it is very hard to recognize and find the foreign body.

Dr. Stolte mentioned the case of a woman who swallowed a big piece of bone in eating her soup. She felt at once a severe pain, rushed to a specialist, who tried to convince her that it was just globus hystericus, although she was in an agony of pain. He tried to do the same thing for two days, pushing a probe up and down, showing that there was nothing there. She

came on the third day to Dr. Stolte with a temperature of 103° , with symptoms of sepsis of the esophageal wall and the mediastinum.

As Dr. Ingals said one often glides over a foreign body without seeing it. Recognizing this, Dr. Stolte used a spatula speculum which leaves open one side of the esophagus, especially as in nearly all cases of this kind the foreign body is located within the mouth or below the mouth of the esophagus. He was able at once to discover the bone, three-quarters of an inch wide and one and a quarter inches long, very sharp, with cutting edges, and also a big gangrenous erosion in the esophagus. He succeeded in removing the bone under anesthesia, within a few minutes. After the foreign body was removed the patient was pulled through the very critical situation, as there was a beginning septic mediastinitis. Temperature dropped the next day to 102° , and within a week the patient was able to swallow without pain. The symptoms gradually disappeared altogether. No stricture was left. This shows that the general practitioner ought to hear about these things as often as possible.

DR. O. T. FREER stated that the difficulty referred to by Drs. Ingals and Friedberg, of having the esophageal tube glide past an undiscovered foreign body, has also been his. In such cases, where the foreign body is situated in the laryngo-pharynx or behind the larynx it may be made visible by that laryngeal speculum of Bruening's, which has a slender beak about two inches long. With this beak introduced as a lever behind the larynx, the larynx may be lifted forward, so that the laryngo-pharynx and entrance to the esophagus are widely stretched open to view. A case in illustration: A tailor, whom Dr. Freer saw with Dr. Austin Hayden, had a broken needle lodged in the posterior esophageal wall just below his cricoid cartilage. The esophageal tube slid by this needle without disclosing it but when the Bruening's speculum was introduced it could be readily seen and extracted.

For illumination in esophagoscopy and bronchoscopy, Dr. Freer uses the Kirstein head-lamp fitted with an umbrella filament light bulb, a device which we also owe to the genius of Bruening. In this manner a long pencil of light is obtained of such depth of focus and penetration, that the whole length of the tube, and especially its bottom, are evenly and brightly illuminated. The ordinary horse-shoe filament, light bulb, when used in the Kirstein lamp, gives a much longer pencil of light

than the head mirror, but it is not so effective as the Bruening's bulb.

Dr. Freer has not found the small long-stemmed, rice-grain lamps used in the tube and so easily fouled and burnt out, and Bruenings' attachment of the Kirstein lamp directly to the tube, so good nor so reliable as the original Kirstein lamp with the Bruening bulb used on the forehead, as a freedom of intratubal manipulation is thus obtained which can be got in no other way.

There is one condition where all intra-esophageal manipulation is contra-indicated and the external operation of esophagotomy is the proper one, and that is where a beginning phlegmon behind and beside the trachea in the neck shows that a foreign body has already perforated the esophageal wall.

DR. JOSEPH C. BECK reported two fatalities in his experience this summer in esophagus foreign bodies. He reported them because Dr. Ingals mentioned the fact that these cases are not recorded, for various reasons. He stated that he was safe in doing this, however. Both cases were the result of the stimulation of publishing in general journals the beautiful instruments, broncho-esophagoscopes, used by general surgeons. Both came to him one week after the foreign body had been in the esophagus. In one case he did not succeed in even passing a tube until after death. The death was on the table. The child had a septic pneumonia, and Dr. Beck was urged by the gentleman who had attempted to remove it to at least make an attempt. This was the case of a penny in the esophagus. On looking in he found a frightful condition of affairs, great traumatism.

The other case, that of a pearl-button, had been treated something on the order of the pipe-stem story referred to by Dr. Ballenger. A picture had been shown of the foreign body, and later a medicine given, of a syrupy nature, to dissolve the button. Later an X-ray picture was shown with the button gone. Dr. Beck felt the foreign body and tried his best to remove it, but could not do so with any form of instrument, the tissues were so traumatised. It was finally given up and the child died of a septic infection.

Dr. Beck simply mentions these cases as showing the danger of men doing this work who have not been properly trained and who have not sufficient experience.

DR. L. W. DEAN stated that he wished to report the case of a patient who was unable to swallow even a drop of water. This patient was a woman, about 63 years of age. At the age of 18, she had swallowed some concentrated lye, and since that time had been able to swallow only semi-solid foods. About two days before Dr. Dean saw her she was eating some soft salmon and suddenly found that she could not swallow even a drop of water. She was brought to Iowa City. In the meantime she had been given rectal injections of water in order to keep up her strength. She was taken to the internist who made a diagnosis of a malignant growth, superimposed upon a cicatricial stenosis of the esophagus. The physician, hearing of the esophagoscope, wished to have an examination made, and with the internist brought the case to Dr. Dean. The esophagoscope was passed, and as soon as the stricture was approached, Dr. Dean took one look and then asked the internist, who had never looked in an esophagoscope in his life, to look in and tell him what he saw. He said he saw a vertebra of salmon fitting in the stricture of the esophagus. This was the case. The vertebra fitted the stricture similar to a cork in a bottle. The vertebra was dislodged with a bent probe and readily removed.

A second interesting case that they had was that of a child, four years of age, who had never been able to swallow anything except liquids. The passage of the esophagoscope showed a round tumor at the cardiac end of the esophagus, underneath the mucous membrane of the esophagus. It was freely movable. It could be pressed down. The diagnosis made by the internist, surgeon and Dr. Dean was a congenital tumor of the esophagus, simple in nature. The problem presented was the removal of the tumor. Dr. Jepson, the general surgeon, advised the parents to have this patient operated, and the operation as planned was this: to open the stomach, and after the stomach was opened to have the esophagoscope passed, forcing the tumor, as was thought could be done, into the cardiac end of the esophagus, where it could be grasped by him and removed. Unfortunately, this patient did not return and they were not able to complete their work, in what seemed to them a very interesting case.

DR. A. M. CORWIN stated that the dangers of the operation had been fully pointed out by Dr. Ingals and others, but that a case that he remembered seeing years ago shows the danger of delaying removal where a history of foreign body in the esophagus is present. The patient was a well-nourished woman with a pulse of 160, nearly

in collapse, but not unconscious, with a history of having swallowed a foreign body, a bone of some sort, a week or two before. At first she could swallow ordinary things, but later was unable to swallow even water, and within a few hours from the time he saw her the history was that she suddenly began to swallow again. She was not then suffering from great dyspnea, but she said that at the time she began swallowing again she had considerable pain in the chest and shortness of breath. He looked her chest over thoroughly and found that the right lung was collapsed and pneumo-sero or pyo-thorax present. He had the patient swallow a very little warm water, which evidently went directly into the pleural cavity through an esophageal ulceration. The woman was in such condition of collapse that the only prognosis was made that could be made, and in order to relieve the condition of infection which was taking place in the chest, an opening was made and a mixture of blood and fluid, pus and food, drawn off from the chest. The patient died of septic poisoning within a few hours. Nothing could have been done locally by passing tubes in that case. This simply accentuates the need of going after these cases in the proper manner, with the X-ray, locating the foreign body and removing it before irreparable harm has been done.

DR. INGALS (closing) stated that the majority of foreign bodies lodge back of the cricoid cartilage. Respiration normally opens the esophagus below the first constriction. He has not attempted to secure any greater dilatation of the esophagus by deep respiration. The foreign body is firmly grasped by the normal muscular contraction and by the swelling, but he has not observed strictures. Spasm of the esophagus is not at all infrequent in such cases, which should be relieved by complete anesthesia, unless there is sufficient dyspnea to contra-indicate.

DR. FRIEDBERG (closing) wished to say a word in regard to spasm of the esophagus. He believes that under deep anesthesia this is overcome, although in one case he saw, that of a marble in the esophagus, anesthesia was not able to overcome contraction of the cardiac end of the esophagus.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL
AND OTOLOGICAL SOCIETY.

Seventeenth Annual Meeting, Atlantic City, June 1, 2 and 3, 1911.

CHEVALIER JACKSON, M. D., PRESIDENT.

(Continued from Page 157.)

The So-called Conservative Mastoid Operations, With a Description of the Technics of Heath, Bondy and Siebenmann. By
GEORGE L. RICHARDS, M. D.

Apart from cases in which the radical mastoid operation is definitely indicated there are many cases of chronic suppuration where the greater portion of the drum-membrane is still present, and the ossicular chain intact, but where the drainage is not sufficiently good to bring about cessation of the discharge. Many of these cases have a fair degree of hearing, and the operator hesitates to subject the patient to a severe operation for fear of further injury to the hearing. In such cases, operated upon radically, it will frequently be found that the source of the infection is in a diseased antrum, the lining-membrane of which is secreting muco-pus which drains out by way of the attic and tympanic cavity. Ossiculectomy in such cases often fails to stop the discharge, and does conserve the hearing.

In order to overcome these difficulties, Mr. Charles J. Heath, of the Golden Square Hospital, London, took up the problems of draining the antrum and at the same time saving the drum-membrane and ossicles with the idea of not only curing the pathological process but saving and even improving the hearing. The so-called Heath operation was devised for this purpose. The procedure is described in detail in the paper, from the author's observation of the operation as performed by Heath, the description having been approved by him. This method is followed in sub-acute cases, cholesteatoma being considered a distinct contra-indication.

Bondy, an assistant in the clinic of Prof. Urbantschitsch, devised an operation designed to effect somewhat the same result as that aimed at by Heath. Unlike Heath, however, he operates only on chronic cases, including among them, cholesteatoma. The purpose of this operation is the protection or conservation of the drum-membrane, and the ossicles; hence it is necessary that the ossicles be neither extracted nor disturbed in their relationship. At the

same time, in order to stop the pus-discharge, it is necessary that the middle-ear cavity be drained as freely as possible, not only for present purposes, but in case of further operative procedure. The details of the method are described.

The operation of Sibenmann cannot properly be called a conservative operation, in the author's opinion, but rather a conservative type of radical operation. The operation performed by him differs from the radical mastoid operation as ordinarily performed, in that all he does is to remove as much of the bone of the mastoid region and attic as is necessary to make all parts accessible through the external canal, together with the ossicles and the drum-membrane. The curet is not used, as Siebenmann thinks nothing is gained in time, the risk to the patient is increased, and the prevention of the reformation of the cholesteatoma is not attained. An essential part of this operation is the flap, which is described in detail. The choice of one of these operations must depend upon the individual case.

DISCUSSION.

DR. W. SOHIER BRYANT said: We have heard discussed the technic and details of the modified radical operation with the preservation of the drum-membrane and the ossicles, which has become almost universally identified with the name of Charles J. Heath, the English author who is generally accredited with being its originator. It may be of some interest in this connection to know that to America, rather than to England, belongs the credit of priority in using and demonstrating this improved method of operating for chronic otorrhea. As early as November 28, 1905, it was my privilege to present at the meeting of the New York Otological Society a case upon whom the operation had been successfully performed on July 27, 1905. An account of this operation appeared in the *Archives of Otology*, February, 1906, while Heath's article was not published in *The Lancet* until August 11 of that year (1906). Heath's work was done in June, 1906, while mine dates back to 1905.

It was furthermore my pleasure to make two other presentations of the operation, both of which antedate any recorded work of Heath's: (a) At the meeting of the New York Otological Society, January 23, 1906; (b) at the meeting of the Section on Otology, New York Academy of Medicine, April 12, 1906.

I want to distinguish between the conservative radical and the modified radical mastoid operation. In the conservative radical, the ordinary Schwartze-Stacke operation is carried as far as removing

the ossicles and the tympanic membrane, but the inner tympanic wall is not curetted, nor is the Eustachian tube closed. In the modified radical operation the ossicles and the drum-membrane are retained. I performed a modified radical operation on September 14, 1904. The case was presented before the New York Academy of Medicine, Otological Society, on March 9, 1905, and appears in the *Archives of Otology*, Vol. 34, No. 3, June, 1905.

DR. J. A. STUCKY has performed the Heath operation three times and in each case had subsequently to do the radical operation. He does not believe that any results could be obtained from the Heath operation that could not be got from a thoroughly performed classical operation. He has examined some of Heath's patients from two months to three years after operation. Two cases he has examined twice. In two, the results were ideal; in the others the drum-membrane was still soggy.

DR. ARTHUR B. DUEL had not had sufficient experience with the three operations under discussion to speak convincingly concerning them. They involve, however, several surgical principles which are interesting.

For a number of years practically all otologists considered a chronic discharging ear which had resisted the usual measures of cleanliness and hygiene as a menace to the patient, which should be operated upon in order to stop the discharge. The length of the time in which these measures should be employed before operation was resorted to, varied according to the views of the operator. All such patients were looked upon as being in a precarious condition. When the radical operation was suggested, and it became known that it would cure the majority of these cases, this was the procedure which was advised, and surgeons continued to operate, some with a technic of their own, others with someone's else technic, and the variations in method were discussed as to their relative merits. Finally it was discovered that a simpler process would cure the disease in a number of cases. Then came the discussion of ossiculectomy and the comparison of the two methods. They represented each a different class of cases,—one class which could be cured by ossiculectomy, and the other which could be cured only by radical operation. Naturally, in the cases which were cured without ossiculectomy, the hearing was better than in those where this was resorted to.

There are many chronic suppurative cases in which there is no necessity for continuance of treatment by hygienic measures, and in such cases the radical operation should be advised. There are the

cases of cholesteatomata, and where functional examination shows that there is a fistula leading into the labyrinth or where there is found to be decided necrosis or caries of the ossicles, internal wall of the antrum, or the additus ad antrum. Other cases, with large central perforation, with profuse discharge, and with stoppage of drainage, can undoubtedly be cured by a less radical operation than exenteration of the middle-ear, destruction of the ossicular chain, and loss of hearing. Experience had taught him more and more each year that many cases can be cured by drainage from the middle-ear through a posterior operation, leaving the drum-membrane and ossicles intact. Some method of posterior drainage, leaving these structures in place, would succeed in reducing to one-half the number of cases of radical operation.

DR. FRANK ALLPORT feels as Dr. Stucky, Dr. Barnhill and others do, that, as a rule, the Heath operation is merely a makeshift—it does not get at the seat of the trouble. He does not mean to say that there are not some cases which will be cured by the Heath operation, but the question is, is it a wise and proper surgical procedure in the vast majority of cases of chronic purulent otorrhea of an intractable nature? Almost all of these cases are accompanied by necrosis of the antrum, middle-ear, ossicles, attic and usually the mastoid cells down to the tip. The Heath operation does not interfere with the attic, or the ossicles, or the tympanic walls, or the end mastoid cells. The operation practically merely consists in opening the antrum and thereafter depending upon irrigation and drainage to complete the cure. The operation, therefore, cannot appeal to one's surgical sense and can only cure a few cases where operations of any kind are indicated. It may possibly be that this operation should be tried in exceptional cases, such as those mentioned by Dr. Beck, in which both ears are diseased, or in children where we can depend upon the natural resources of the body to go a long ways towards the production of a favorable result. Even in those cases, however, the wisdom of the Heath operation is not by any means established. Its position seems to be getting less secure as time and experience outline the boundaries of its usefulness. Dr. Allport feels that, after all, if an operation is to be done it is better to do thorough work to get at the real seat of the trouble and to perform the classical, radical mastoid operation.

Dr. Allport was interested to hear what Dr. Stucky had to say about his ossiculectomies. He remembered that some years ago that Dr. Stucky spoke valiantly before this society in advocating ossiculectomy for chronic, purulent otorrhea. He remembered that

about a year ago, Dr. Stucky, with his natural honesty, declared again in the halls of this society, that he had been compelled to subsequently supplement all of these ossiculectomies by the radical mastoid operation. Dr. Stucky, also, some years ago, was warm in his praise of the Heath operation and now he comes before us and admits that most of these operations have had to be re-operated by the radical mastoid operation. Dr. Stucky is a good operator and an honest man and he believes that if every one were as honest, the Heath operation by this time would be considered an unwise procedure and would be relegated to almost oblivion. The classical, radical mastoid operation, in the speaker's opinion, is the only operation, and all who try to escape it will be compelled, sooner or later, to return to it, unless some procedure which we do not yet know of be discovered.

Referring to the flap, he said that he believed the simplest and the best one that can be made is the Panse L-flap instead of the Panse T-flap. In the Panse L-flap the incision along the diameter of the meatus is made as close to the bottom of the meatus as possible and all of the meatal tissue is thereby thrown into the upper flap, which is unquestionably the region where the transplantation of tissue is most desirable. This flap can be beautifully and simply made by using the meatal divulsors, which are for sale by Mueller, Hardy and others. By forcing the blades of the divulsors apart, the meatus is put on the stretch, and the lower arm of the divulsors being used as a guide for the knife the incision is easily and accurately made.

Saturday, June 3.

**SYMPOSIUM:—RECENT ADVANCES IN THE TREATMENT
OF DISEASES OF THE EUSTACHIAN TUBE.**

- (a) **The Pharyngeal Orifice of the Eustachian Tube, With a Demonstration of a Speculum and Other Instruments for the Direct Examination and Treatment thereof.** By SIDNEY YANKAUER, M. D.

Dr. Yankauer described his direct naso-pharyngeal speculum and intra-tubal speculum. He first experimented with straight tubes, but, finding that these caused injury to the soft palate, which was to be scrupulously avoided, he abandoned the straight tubes. After studying the mathematics of the situation he devised the instrument

which is described in the paper. The work of Gyerygai in the direct examination of the naso-pharynx by means of straight tubes was reviewed.

The author's speculum is so constructed that the anterior wall of that part of the instrument which enters the naso-pharynx comes in line with the posterior wall of that part which presses against the angle of the mouth, so that it forms a lever having a thickness corresponding to the thickness of the meatal opening. The parts are, therefore, brought into view with the least possible amount of pressure on the soft palate, so that injury to this structure is entirely avoided.

Cocain is used for the first few introductions of the speculum, and in sensitive patients each time. The patient sits upright in front of the operator. One side of the naso-pharynx is examined at a time. Attention was called to the difference in appearance and relationship of organs examined by the direct method and by means of reflecting instruments. The anatomical structures in the neighborhood of the pharyngeal orifice, and their behavior under physiological and pathological conditions were discussed.

As the direction of the speculum corresponds to the direction of the axis of the tube, it becomes possible to insert straight instruments into the tube, for the purpose of investigation or treatment. If the interior be cocaineized, it is possible to insert a short, straight tube for about $1\frac{1}{2}$ cm. into the Eustachian tube. The intra-tubal speculum is used for this purpose.

Pathological findings in and about the fossa of Rosenmueller were next discussed. Six cases were cited in which there was excessive secretion in the fossa of Rosenmueller. All patients complained of marked tinnitus aurium, but not of deafness. The proximity of the fossa of Rosenmueller to the carotid artery, to the isthmus of the Eustachian tube, and to the labyrinthine capsule, led to the assumption that the head-noises were due to the breaking of air-bubbles or to the movement of the mucus within the fossa. The absence of inflammation in the fossa, and the absence of all evidence of middle-ear disease, the drum-membrane being normal and the Eustachian tube patent in each case, further substantiated this view. The mucus was removed by the irrigation of the fossa, either through the speculum with a straight cannula, or by means of the old-fashioned post-nasal syringe. After the fossa was thoroughly cleansed out an application of five or ten per cent solution of nitrate of silver was made to the fossa through the speculum. In four of the six cases the excessive secretion disappeared after a

few treatments, given every other day. With the disappearance of the secretion, the head-noises ceased completely. In two of these four cases, relief was permanent. In the other two, the patients returned several times with renewed secretion in the fossa. Relief was prompt and decided in the four cases, the tinnitus being markedly diminished after the first treatment. In the remaining two of the six cases cited, the secretion continued in spite of the treatment, and the tinnitus was not diminished.

(b) Examination and Treatment of the Eustachian Tube by the Aid of the Naso-pharyngoscope. By E. M. HOLMES, M. D.

Dr. Holmes presented his naso-pharyngoscope, and gave a resumé of the results of continued study of the pathological conditions affecting the Eustachian tube and their direct treatment by means of this instrument. The technic of examination is simple, and is successful in 99 per cent of all cases. The technic necessary for the various methods of treatment is not as simple as that for examination, but with ordinary skill it is soon acquired.

The anatomy of the Eustachian tube varies as much as that of the nose and requires considerable study, as one must determine what variations are within physiological limits and what are really pathological.

He had examined with the naso-pharyngoscope over 900 cases, and had classified 409 cases. He had also examined 64 additional cases, from the eye clinic, who gave no symptoms of catarrh of the nose or ear. Among the pathological conditions found were: acute and chronic, purulent and non-purulent inflammation, hypertrophy and atrophy of the mucous membranes, hypertrophy of the posterior ends of the turbinate, adenoid growth, polypi, epi-pharyngeal abscess, syphilitic lesions. There were also found changes due to cardiac, renal, gastro-intestinal and lithemic causes. The most important is the associated ear-pathology. The general prognosis of the local pathology is good. Cases of local atrophy have in some instances shown improvement, yet were not cured. Marked improvement of the epi-pharynx frequently follows removal of the hypertrophied posterior turbinate. The results of treatment in cases of associated acute secretive middle-ear are most gratifying.

Thirty-one cases of acute secretive middle-ear affections were given in tabular form. The majority of these were relieved of distressing symptoms by his method of treatment, and nearly all were saved a discharging ear. The convalescence was also much shorter than in similar cases when paracentesis is performed. There were only two cases which were not relieved.

In closing, the reader of the paper emphasized the importance of being able to easily and thoroughly examine the epi-pharynx and to treat any pathological conditions by the aid of vision.

DISCUSSION.

DR. W. SOHLER BRYANT said: I find that the old-fashioned, posterior rhinoscopic method of examining the mouth of the Eustachian tube with the mirror is still useful in the majority of cases. As you know, however, at times this method is neither satisfactory nor practical. A number of adaptations of the cystoscope have been described for exact naso-pharyngoscopy and for use in cases where the mirror is unsatisfactory. The instruments are passed through the nose, as Valentin's salpingoscope, or through the mouth as Hays' pharyngoscope. The Holmes model of the Valentin salpingoscope is the best I have seen.

I have found Hays' pharyngoscope serviceable in cases where obstruction of the nose prevents passage of the salpingoscope. The trans-nasal method has one great advantage over all methods via the mouth in that it permits the inspection of the Eustachian orifice in normal motion, which cannot be observed satisfactorily by the other methods.

Von Gyergyai's and Dr. Yankauer's instruments are based on quite a different mechanical principle and belong in another class. In cases where the palatal confirmation is sufficiently ample to permit their use, they give direct access to the parts and consequently make easy manipulation possible.

Dr. Bryant further said: While in the greater number of cases of middle-ear disease, inspection of the pharyngeal mouth of the tube adds but little to the diagnosis, in the lesser number of cases such inspection is of considerable importance because it reveals unsuspected conditions and fixes the details of previous assumptions. I have found such inspection especially advantageous in chronic obstruction of the Eustachian tube, where the cause cannot be determined easily without direct inspection of the orifice of the tube. The inspection enables us to determine the seat and nature of the fundamental cause of obstruction—whether in the tube itself, in the fossa of Rosenmueller, the mucous membrane surrounding the tube, the posterior ends of the turbinates, or the adenoid tissue. A doubtful diagnosis is made positive and sometimes serious unsuspected conditions, such as the existence of malignant disease, are brought to light.

"Here again," said Dr. Bryant, "in the majority of cases there is no need of knowing the exact conditions existing in the immediate

neighborhood of the mouth of the tube, for our knowledge of the general conditions is sufficient to enable us to obtain satisfactory results from treatment. In the minority of cases, however, the local conditions differ from the general, and an inspection of the mouth of the tube enables us to determine the local change that is interfering with the function of the tube; thus putting us in a position to correct it. By means of the salpingoscope or the pharyngoscope we can ensure the accuracy of local treatment—the application of reagents, operative procedures, or catheterization of the tube. We are thus enabled to apply with the greatest benefit, fulguration or cauterization, to break adhesions and to remove redundant tissue."

DR. THOMAS J. HARRIS said the papers of Dr. Yankauer and Holmes represent some of the best work that has been done by the members of this society, the kind of work that the society stands for, namely, original work. It had been a revelation to him to realize how much can be seen by direct examination of the Eustachian tube. He had also been surprised to learn of the variety of conditions which effect these parts, and of how much can be accomplished in the treatment thereof by means of direct inspection.

He asked Dr. Yankauer if the intractable cases to which he referred are really unmanageable, or if the difficulties which they present may be overcome by practice.

He would be glad if the gentlemen, in closing the discussion, would tell which is the better method, and what are the advantages of one method over the other.

DR. SIDNEY YANKAUER, in closing the discussion, said he had never used enough pressure to injure the soft palate with the speculum. The amount of pressure used can be very easily gauged, and it is unnecessary to exert sufficient pressure to cause any traumatism. When he used the straight tubes he had to pull the palate so much further forward that he did sometimes injure it, but since he had been employing this speculum, this difficulty had been obviated.

Dr. Holmes' cases of acute otitis media were particularly interesting. He had attempted to treat such cases in a similar manner, making applications of cocain and adrenalin, and of argyrol, to the inside of the tube.

The result of his method of treatment was immediate cessation of the symptoms and recession of the drum, lasting from six to eight hours. In cases seen early, where bulging is not very pronounced and where it could not be determined whether the case is

going on to suppuration or whether it is a simple catarrhal inflammation, relief was permanent. Where the symptoms were very pronounced, relief was only temporary. In a few cases the pain did not return, but the bulging of the drum-membrane remained. Such patients were willing to stand the deafness as they were free from the pain, and they perforated in forty-eight hours. These cases healed with a distinct round defect in the drum-membrane, closed with thin scar-tissue, which is more easily moved with the pneumatic speculum than the remainder of the drum-membrane. He felt that such injury to the drum-membrane caused a loss of hearing, and so he had ceased to treat acute otitis media by this method.

As to the comparison of his method of examination and that of Dr. Holmes, as suggested by Dr. Harris, none was to be made, each being supplementary to the other. It is quite important in many instances to look into the fossa of Rosenmueller with the salpingoscope, but until one has used the direct speculum it is difficult to realize what a place this fossa is. Sometimes it appears as a mere slit with reflected light, but when the direct speculum is put in, it is found to be quite deep. The treatment of the fossa of Rosenmueller is quite simple, and is carried out with the speculum.

The objection on the part of the patients to the speculum is of no consequence. They say that it does not hurt, but is disagreeable on account of the gagging. One patient, a young man who fainted the first time the speaker tried to pass the Eustachian catheter through the nose, after a few trials, permitted him to pass the direct speculum without cocain.

DR. HOLMES, in closing the discussion, said Dr. Yankauer's statement about not being able to see the fossa of Rosenmueller was true of the pharyngoscope, but not of the speaker's instrument. The fossa can be seen in its normal condition, and can be operated upon when necessary.

He said the salpingoscope of Balentyne was one effort in the right direction but it was not neatly designed. Patients do not object to the introduction and manipulation of the naso-pharyngoscope. He used it in a child $2\frac{1}{2}$ years old. Children do object to the light, so that it is better to introduce the instrument before lighting it.

In his first fifty cases he had found one growth in the tube. He removed it and presented it at the Boston meeting of this society, and he had seen but one growth in the tube since. In this series of almost 1,000 cases, this would be two-tenths per cent. These

statistics were not convincing, and he simply gave them as he found them.

In treating the tube by this method there is no staining with blood, as in the old method of treating the tube blindly. The secret of success with this method is the avoidance of traumatism to the tube. The instrument enables one to treat the tube easily unless there is deflection sufficient to require nasal operation.

- (c) **Report of Twelve Cases Operated Upon by the Yankauer Method for Closure of the Eustachian Tube.** By SAMUEL McCULLAGH, M. D.

Published in full in the June, 1911, issue of THE LARYNGOSCOPE, p. 683.

Various Forms of Snuffling with Especial Reference to the Indications for Nasal Operations. FROESCHELS. *Wr. med. Wchnschr.*, No. 3, 1911.

There is one form of rhinolalia clausa which is not due to an organic obstruction in the nose or pharynx, but to an abnormal contraction of the velum palati. The diagnosis may be verified by passing a probe through the nose into the pharynx, and having the patient repeat certain test-words. If the nasal twang disappears, the diagnosis is correct and an operation is not indicated. A good result may be obtained by gradual dilation.

ED.

The Treatment of Asthma by Resection of the Nervus Ethmoidalis Anterior. NEUMAYER. *Ztschr. f. Laryngol., Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, 1911.

By bilateral resection of the nervus ethmoidalis anterior within the orbit just before its entrance into the foramen ethmoidale anterius, the author could bring about a cessation of the attacks in those cases of asthma which, by the positive result of the "cocain test," proved to be of nasal origin.

GLOGAU.

BOOK REVIEWS.

Diseases of the Nose and Throat.

By ST. CLAIR THOMSON, M. D., F. R. C. P., F. R. C. S., Physician for Diseases of the Throat and Professor of Laryngology in King's College Hospital, London. 791 pages, with 18 plates and 294 figures in the text. Price, \$7.50. D. Appleton and Co., New York, 1911.

Long practical experience and special facility of expression, thorough familiarity with the special literature, many years of editorial work, and a fair, though critical mind, are the unusually strong qualifications which make it possible for Dr. St. Clair Thomson to present the laryngological world, in crystalized form, with this volume on "Diseases of the Nose and Throat."

In it the author treats exhaustively of the methods of examination, the anatomy and physiology, and the pathology of the nose and accessory sinuses, naso-pharynx, oro-pharynx, larynx, trachea and esophagus, together with their respective treatment from both medical and surgical aspects.

It is a volume peculiarly adapted both to the general practitioner and laryngologist. The subject-matter is stated in Dr. Thomson's clear, terse style, and is not encumbered by unnecessary details; the illustrations are excellent and for the greater part original; the excellent descriptions of the special and major operative technic may be singled out as the best feature of the book. A valuable chapter on formulae and a carefully prepared index accompany the volume.

We congratulate Dr. Thomson on this splendid contribution to our textbook literature, which his experience first as general practitioner and later as laryngologist of wide and practical range have enabled him to present so ably and artistically.

The American edition bears the imprint of D. Appleton, which is, without further comment, its best recommendation of perfect typography, presswork and illustrations.

The Accessory Sinuses of the Nose in Children.—102 Specimens Reproduced in Natural Size From Photographs.

By PROF. DR. A. ONODI, with a preface by PROF. DR. W. WALDEYER. Translated by Carl Prounitz, M. D. Quarto volume, 123 pages, with 102 full-size plates. Muslin, \$7.00 net. Wm. Wood & Co., New York, 1911.

The exhaustive, careful and original work of this investigation on the anatomy of the accessory sinuses is so well known and so freely quoted in our literature that this new phase of the subject will be received by all interested readers as an additional evidence of the author's valuable contribution to this special anatomy.

In a large series of special photographs in natural size, Onodi discusses the development of the accessory sinuses from their first evidence to after the period of puberty. The measurements and landmarks of the accessory sinuses in children vary so materially from those in the adult skull that operative technic, methods of diagnosis and accessibility to the several sinuses must be materially modified in the care of these cases in children.

The descriptive text is elaborated and is printed in German, English and French; thus permitting the widest dissemination of this important subject.

The preface by Dr. W. Waldeyer gives additional stamp to the importance of this work and we quote from the preface as follows: "In

view of the fact that these pneumatic cavities of the skull are still so little understood, especially in their physiological bearings, every fresh contribution to their exact study is of value; but especial importance attaches to a research on their development, such as is given in this work.....The sections have been laid in the three principal planes of the body and appear to me to have been well chosen. Since accurate measurements are given in every instance, a good idea is afforded of the gradual development of the frontal and sphenoidal sinuses, the anterior and posterior ethmoidal cells and the maxillary antrum. One of the necessary foundations has thus been laid upon which must rest any subsequent investigation of the form, relations and functions of these important air cavities."

Die Krankheiten der Nasenscheidewand und ihre Behandlung.

By DR. LEO KATZ. 1st p. 170, with 8 plates and 34 illustrations in the text. Price, M. 6. 80. Curt Kabitzsch, Wuerzburg, 1908.

There has been such a stimulus in rhinology since the advent and perfection of the technic of resection of the nasal septum, that the substantial monograph by Dr. Katz may be perused with interest by the profession.

It contains: (1) Anatomical considerations of the various cartilages and bones that constitute the septum, histological data and a discussion of the nerves and blood-vessels of the septum. (2) A careful discussion of the examination of the septum. (3) The methods of anesthetizing this area, the use of adrenalin, alypin, toxic effects of drugs thus used and the technic of infiltrating anesthesia. (4) A detailed description of the variety of deformities of the nasal septum. (5) Indications and contra-indications for the proper disposal of these several deformities. (6) Fractures and dislocations of the septum and their treatment. (7) Tuberculosis of the septum, its etiology, pathology, symptoms, diagnosis, prognosis and therapy. (8) Syphilis of the nasal septum. In this chapter the author considers minutely the different stages of syphilitic affections in relation to this tissue, and includes a careful description of the treatment. He concludes the chapter with a discussion of paraffin-therapy for saddle-nose. (9) Rhinoscleroma. (10) Malignant tumors of the septum. (11) Benign tumors of the septum. (12) Circumscribed inflammation of traumatic and non-traumatic character. The author includes hematomata and abscesses, several types of perichondritis, xanthose, perforating ulcer, and the disposal of mechanical perforation of the septum. The monograph is profusely illustrated and contains a valuable index of the literature on this subject.

Atlas of Killian's Tracheo-Bronchoscopy. Colored Plates Representing Pathological Preparations from Cases Examined During Life by Means of Tracheo-Bronchoscopy.

By SANITAETSRAT DR. MANN, translated by THOMAS GUTHRIE, M. B., Liverpool. Price, bound, M. 8. Curt Kabitzsch, Wuerzburg, 1911.

This work is an atlas on the pathological anatomy of the tumors of the thorax, based on several cases in which the diagnosis depended largely on tracheo-bronchoscopy. The post-mortem findings in these cases are beautifully presented in full-sized colored lithographs, and each plate is accompanied by tracings and full descriptive text. It is regrettable that tracheo-bronchoscopic pictures are not present to make of this series a more complete description. The text is printed in three separate columns in German, English and French, so as to make the atlas especially serviceable to all readers.

This atlas enables the reader to follow minutely fifteen exceedingly interesting cases from clinical examination to the post-mortem room. It is unusually valuable and well worth the most critical examination and careful reading.

Die Verengerungen der oberen Luftwege nach dem Luftrohrerschnitt und deren Behandlung.

By DR. ARTHUR THOST; with an introductory chapter by PROFESSOR KUEMMELL. Pp. 557, with 42 illustrations and one X-ray plate. Lemcke and Buechner, New York, 1911.

This volume is especially opportune and goes hand-in-hand with the advances that are being made in the treatment of the upper respiratory tract since the introduction of tracheoscopy and bronchoscopy. The author prefaces the present subject with an historical review of this field, the pathology, anatomy, etiology, and forms of stenoses. Then follow chapters on the mechanical relations of several structures that enter considerably in the consideration of stenoses of these areas, tracheotomy and de-cannulation, various types of cannulae, the after-treatment of tracheotomy, the examination and diagnosis of stenoses of the upper-air passages and their treatment, Schroeter's and other methods of dilatation of stenoses, the O'Dwyer intubation, operative measures, the dilatation method of the author, and a report of a series of cases illustrative of the practical work accomplished in this field. A very extensive bibliography is appended.

It is only by the concentration of energy and thought that the best results in such special work are obtained, and the vast experience in sixty-five reported cases that have come under the personal observation of the author makes of this volume a valuable contribution to laryngology.

A Laboratory Guide in Bacteriology for the Use of Students, Teachers and Practitioners.

By PAUL G. HEINEMANN, Ph. D. Second Edition, pp. 210, revised and enlarged, net \$1.50. University of Chicago Press, Chicago, 1911.

The rapid extension of the application of bacteriology into the sanitary, domestic, agricultural and industrial sciences has led the author in the second edition of this book to give some consideration to the worker in these branches of science as well as to the medical student for whom the book is primarily intended. To accomplish this and to incorporate new methods the book has been rearranged, partially rewritten and to some extent enlarged. It is divided into seven parts, as follows: (1) bacteriological technic; (2) general bacteriology; (3) important pathogenic bacteria; (4) bacteriological examination of water and sewage; (5) the bacteriological examination of milk; (6) the bacteriological examination of soil; (7) molds, yeasts, torulae and acetic acid bacteria. The topics are well classified and the directions to the student concise, yet clear. The student is encouraged to depend on his own observations and to read well-selected references bearing on the topic at hand. The book is to be recommended.

Direct Laryngoscopy, Bronchoscopy and Esophagoscopy.

By DR. W. BRUENINGS. Translated and edited by W. G. Howarth, M. A. Pp. xiv-370, with 114 illustrations, including 26 plates; price 15/ net. Bailliere, Tindall and Cox, London, 1912.

In the February, 1911, issue of THE LARYNGOSCOPE, we have reviewed the original excellent and practical work in German on "Direct laryngoscopy, bronchoscopy and esophagoscopy." There is so much of merit and value in this volume that an English translation by W. G. Howarth, Laryngologist at the St. Thomas Hospital, in London, has been promptly forthcoming.

We can only repeat our favorable opinion as expressed in our review of the German edition. This book should be in the hands of every active laryngologist who essays tube-work, a specialty in laryngology which is now coming to be recognized as an indispensable part of our widened field of usefulness.

1911

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Note:—All titles marked with a * are abstracted under their respective numbers in the second section. All articles marked with a † have appeared as original papers in THE LARYNGOSCOPE and are referred to as such. Abstracts prepared by the collaborators of THE LARYNGOSCOPE are signed by their respective names. Author's abstracts are signed A. A. Abstracts signed ED. have been prepared at the home office of this journal. Those signed Ex. have been published in other journals.

Authors are requested to notify us of errors or omissions.

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V. DIPHTHERIA AND THYROID GLAND.

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- *3086 THOST, A. Stenosis of the Upper Air Passages Following Tracheotomy; Treatment. (Die Verengerungen der oberen Luftwege nach dem Luftroehrenschnitt und deren Behandlung.) Lemcke and Buechner, New York, 1911.
- 3087 TRAUTMANN. Diseases of Buccal Cavity and Upper Air Passages in Relation to Dermatology. (Die Krankheiten der Mundhoehle und der oberen Luftwege bei Dermatosen mit Beruecksichtigung der Differential-diagnose gegenueber der Syphilis.) J. F. Bergmann, Wiesbaden, 1911.
- 3088 WALLER, H. E. Theory and Practice of Thyroid Therapy. Wm. Wood and Co., N. Y., 1911.
- 3089 WYLLIE, J. Meningitis, Sinus Thrombosis and Abscess of the Brain. Paul B. Hoeber, New York, 1911.

DIGEST OF OTO-LARYNGOLOGY.

1

Complications Following the Submucous Operation Upon the Nasal Septum. J. H. ALEXANDER, *N. Y. Med. Jour.*, p. 783, Oct. 14, 1911.

Complications following submucous resection of the nasal septum are either the result of primary or secondary hemorrhage, or of a mild or severe infection. The clinical histories of three cases of severe infection are reviewed; two of these cases terminated in acute purulent meningitis. The author urges conservatism in the selection of cases. Ed.

2

Case of True Papilloma of the Nasal Septum. H. ARROWSMITH.

Original contribution to *THE LARYNGOSCOPE*, p. 85, Feb., 1911.

7

Tuberculosis of the Mucous Membrane of the Cartilaginous Septum. M. FLUSCHMANN, *Orvosi Hetilap*, No. 37, 1911.

A specimen of the tumor was removed for examination and was histologically diagnosed as lymph sarcoma. The tumor, together with the cartilaginous involvement, was then removed, and a correct diagnosis arrived at. The patient also had an infiltration at the apex of the lung. Pirquet and tuberculin reactions definitely positive. Ed.

16

Submucous resection of the Nasal Septum. C. J. KOENIG.

Original contribution to *THE LARYNGOSCOPE*, p. 1025, Oct., 1911.

19

Extirpation of Tumors of the Vomer Through the Roof of the Mouth. C. H. MAYO, *Ann. of Surg.*, Sept., 1911.

In two cases of malignant disease of the vomer, each with a pear-shaped enlargement of the septum which completely closed the posterior nares, Mayo was able to remove the growth through the roof of the mouth by the removal of a section of the bone 1 inch long and three-fourths of an inch wide. In neither of these cases was it necessary to sever the soft palate as advised by Nelaton—a procedure which, he says, complicates the technic of the operation and the after-care of the patient.—*Ex.*

21

Exostosis of the Septum. M. METZENBAUM.

Original contribution to *THE LARYNGOSCOPE*, p. 652, May, 1911.

30

Developmental Anomaly of the Septum. A. VON GYERGAI. *Orvosi Hetilap*, No. 35, 1911.

This defect was wedge-shaped and was situated on the posterior basal position of the septum; no cicatrices. Inflammation and lues negative

etiologic factors. Von Gyergai holds that the defect was a developmental anomaly. Ed.

33

The Inferior Turbinate; Its Longitudinal Resection for Chronic Intumescence. O. T. FREER.

Original contribution to *THE LARYNGOSCOPE*, p. 1136, Dec., 1911.

34

Large Cyst of the Middle Turbinate of Dermoid Contents. H. GAUDIER.
Rev. hebdomadaire de Laryngologie, d'Otologie et de Rhinologie, p. 97, Jan. 28, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 80, Jan., 1912.

35

Syphilitic Hypertrophy of the Inferior Turbinate with Report of a Case.

J. W. JERVEY, *Jour. A. M. A.*, p. 1191, April, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 666, May, 1911.

37

Complications of Adenoidectomy. ARDENNE, *Jour. de Med. de Bordeaux*, Sept. 17, 1911.

Adenoidectomy is not always an insignificant operation. Accidents, due to incomplete diagnosis, arise, which may, however, be evaded by careful examination. There may be present hemorrhage due to local or general, primary or secondary causes. Ardenne also discusses traumatic and infectious complications, accidents due to breaking of the instruments; torticollis, disturbances due to pieces of the tissue falling into the larynx, and the dangers of the anesthetic. Ed.

43

Is Adenoid Vegetation Generally Congenital? E. ERDELY, *Jahrb. f. Kinderheilk.*, May, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 811, July, 1911.

47

Chondroma of the Septum Following Hematoma. R. GEZES and U. L. TORRINI. *Rev. hebdomadaire de Laryngologie, d'Otologie et de Rhinologie*, p. 1, July 1, 1911.

Hematomata of the nasal septum usually become suppurative. It is unusual for resorption or connective-tissue organization of the extravasation of the blood hemorrhage, cyst-formation or chondromata to result. The last mentioned condition took place in the case of a child of seven months, who sustained trauma because of a fall on her nose. A semi-circular smooth swelling, covered with a normal mucousa, was found on both sides of the septum one centimeter supero-posterior to the spina nasalis anterior, more pronounced on the right side than on the left. It felt hard to the touch, and resisted galvano-cautery treatment. By a process of elimination a diagnosis of chondroma was made. Ed.

48

Complications of Adenoidectomy. GROSSARD and KAUFMANN, *Rev. heb. de Laryngol.*, p. 561, May 20, 1911; *Prat. Med.*, Nos. 5-8, 1911; and *Ann. des Mal. de l'Oreille*, No. 5, 1911.

The authors draw their conclusions from the reports of eminent otologists. The points considered are: 1. Accidents resulting from incomplete diagnosis. 2. Hemorrhage. 3. Traumatic accidents. 4. Infections. 5. Nervous complications. 6. Various accidents. The authors' conclusions are that the operation for adenoid-vegetation is not as simple a one as some suppose and that it requires one who is thoroughly familiar with the anatomy of the region, i. e., a specialist. Ed.

54

Black Vomit in Acute Adenoiditis. GABRIEL M. LANDA, *Rev. de Enf. de Garganta, Nariz y Oides*, Jan., 1911.

A young girl of 15 years was taken ill with headache and fever; temperature, 39° C. On the second day she presented severe vomiting of digested blood (black vomit) such as is frequently observed in yellow fever. Investigating the cause of this vomit, which could not be from yellow fever because this disease is no longer prevalent in Cuba, and neither malaria nor gastric ulcer, as there were no antecedents in this respect, the author examined the naso-pharynx and found a limited group of adenoids, congested with an erosion on one side and evident streaks of blood. As the vomiting occurred early in the morning, it was natural to suppose that the hemorrhage took place during the night and the patient swallowed the blood which was vomited after digestion as a black vomit. The fever subsided on the next day and the hemorrhage seemed to cut short the duration of the disease. MARTINEZ.

63

Structure and Histogenesis of Adenoid Vegetation. RETTERER and LELIEVRE, *Soc. de Biol.*, Feb. 11, 1911.

The process begins with hyperplasia of the elementary epithelium; then follows a metamorphosis from the epithelial mass into net-like diffuse or circumscribed follicles of the condensed connective tissue. Ed.

65

Acute Adenoids; A Contribution to the Study of Glandular Fever. F. SCHLEISSNER, *W. klin. Wchnschr.*, March 2, 1911.

Schneissner feels that glandular fever is often but inflammation of adenoid vegetation. The attack usually lasts but a few days; in infants the clinical picture often suggests retro-pharyngeal abscess; the occurring attacks of fever frequently suggest tuberculosis. During the attack the author warns against local treatment and prefers a dietetic one. During the free intervals the growth may be removed. Ed.

66

Relation of Adenoid Growths in Naso-pharynx to Tuberculosis. SIMON, *Beitr. z. Klin. d. Tuberculose*, Bd. 19, Heft 2, 1911.

Reviewed in *THE LARYNGOSCOPE*, p. 872, Aug., 1911.

70

Force Used in Removal of Adenoids. J. SYSMANSKI, *Jour. of Ophth. and Oto-Laryngol.*, p. 323, Oct., 1911.

Reviewed in THE LARYNGOSCOPE, p. 1178, Dec., 1911.

73

Aprosexia in Cases of Adenoid Vegetation. WEBER, *La Ped. prat.*, Dec. 5, 1911.

Apresexia in connection with adenoid vegetation has usually been imputed as due to the naso-pharyngeal obstructions, but recent investigations have pointed to the possible development of myxedematous conditions which produce the apresexia. If the aprosexia depend upon serious thyroid lesions surgical removal of the adenoids will be of little avail.

Ed.

78

Eye-disturbances Cured by Nasal Operation. E. BAUMGARTEN, *Orvosi Hetilap*, No. 18, 1911, and *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Bd. 45, Heft 6, p. 633, 1911.

Baumgarten adds four new to his six cases of eye-disturbances relieved by nasal operation, previously reported. These four cases consist of two cases of neuritis acuta and one of papillitis chronica and of neuritis retrobulbaris. In three of these cases the nasal symptoms were minor ones, in the fourth an acute suppurative ethmoiditis existed. Often in these cases one finds a very large bulla ethmoidalis or an abnormally large middle turbinate, which should be removed. If the nasal findings are negative, Baumgarten opens the ethmoid sinus, and if these too are negative he exposes the sphenoid sinus.

Ed.

82

Nasal Neuralgia. J. BROECKERT, *Ann. des Mal. de l'Oreille*, p. 1, No. 1, 1911, and *Nederl. Tijdschr. v. Geneesk.*, Bd. 1, p. 1296, 1911.

Abstracted in THE LARYNGOSCOPE, p. 890, Aug., 1911.

85

Headache and Nasal Obstruction. CHAVANNE, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 173, Jan., 1911.

Abstracted in THE LARYNGOSCOPE, p. 1055, Nov., 1911.

86

Case Reports Illustrating Ocular Affections Due to Intra-nasal and Accessory Sinus Disease. L. A. COFFIN.

Original contribution to THE LARYNGOSCOPE, p. 854, Aug., 1911.

87

Ocular Symptoms Produced by Nasal Disease. H. H. B. CUNNINGHAM, *Jour. of Laryngol., Rhinol. and Otol.*, p. 338, July, 1911.

According to the author, ocular affection consequent to nasal lesions may be divided into two classes: (1) Ocular symptoms produced by lesions in the nasal mucosa and (2) ocular symptoms produced by nasal

sinusitis. Under the former, he speaks of epiphora which is both very common and extremely disagreeable. Of eighty-eight cases of lacrimal affection examined by Meyer, only seven showed normal nasal conditions. If a rhinorrhea be present in children, adenoids should be suspected.

Under the second head, Cunningham points out that this means of infection may take place in three ways: (1) Directly through the bone; (2) through the blood, or (3) by means of the lymphatics. The author joins those who strongly urge examination of the nose and nasal sinuses in all cases of ocular disorder of obscure origin. Ed.

94

Case of Retrobulbar Neuritis Associated with Nasal Obstruction. G. S. HETT and E. E. HENDERSON, *Ophth. Rev.*, April, 1911.

Girl, aged 13 years, complained of not being able to see the end of a word. Slight contraction of peripheral field, enlargement of blind spot, small central scotoma for red and green, relative in left eye and absolute in right. Fundus full, but normal. Considerable nasal discharge. Nasal mucosa hyperemic; nasal catarrh; septum deflected to left and showed spur; left middle turbinal greatly hypertrophied and pressed on septum; both inferior turbinals enlarged; transillumination of antra showed crescents on both sides. After operative intervention to relieve nasal conditions, all other symptoms cleared up. Ed.

99

Prophylactic Inoculation Against Hay-Fever. L. NOON, *Lancet*, June 10, 1911.

The plan or experiment followed by Noon was to obtain a numerical measure of the sensitiveness of the patients to the pollen toxin and to observe whether this was increased or decreased by subcutaneous inoculations of various quantities of pollen toxin. It was found that, with well-regulated dosage, it was possible in every case to raise the patient's resistance to a marked degree, within the lapse of a few months, while on the other hand, ill-regulated dosage was at once made evident by a decrease in the resisting power.—*Ex.*

112

Epithelioma of the Nose. Treatment with X-rays. G. ALLAIRE, *Gaz. de Nantes*, April 29, 1911.

X-ray treatment of epithelioma is attended with various effects. One case will be greatly benefited, in another, quite the opposite result will be obtained. In this article the author, apropos of two cases, attempts to detail under just what circumstances good results may be realized, and just how these treatments are to be administered. Ed.

115

Choanal Polyp. R. BEAL, *Bull. d'Oto-Rhino-Laryngol.*, p. 88, April, 1911.

Beal describes a case in which he removed a cyst from the maxillary sinus by carefully pulling the pedicle. The author uses his data to substantiate Killian's theory that choanal polypi originate in the maxillary sinus. Ed.

117

Adenoma of the Nose. C. CALDERA, *Arch. ital. di Otol., Rinol. e Laringol.*, p. 282, July, 1911.

This small tumor was located on the epithelium of the anterior nares, involving the mucosa of the inferior turbinate and meatus. The patient was a little girl of 13 years. It was removed by chiseling, curettement and cauterization with lactic acid. Microscopic examination proved this to be a cause of adenoma. Ed.

120

Interesting Case of Rhinophyma. COMPAIRE, *Clin. y Lab.*, No. 5, 1911.

Compaired reports on an interesting case of rhinophyma which he cured with ignipuncture and zinc-oxysalve, together with douching of resorcin solution and applications of menthol. Ed.

122

Epithelioma of the Lower Eye-lid and Ala Nasi Cured by Radium-therapy.

J. G. DEL MAZO, *Rev. ibero-am. de Cien. med.*, Jan., 1911.

Abstracted in THE LARYNGOSCOPE, p. 1150, Dec., 1911.

123

Case of Myxo-fibro-sarcoma of the Nose and Naso-pharynx Removed by Bodini's Modification of the Boeckel Operation. D. S. DOUGHERTY.

Original contribution to THE LARYNGOSCOPE, p. 650, May, 1911.

124

Complicated Phenomenal Syndrome Resulting From Large Rhinolith. T.

ENRICO, *Boll. delle Mal. dell'Orecchio della Gola, e del Naso*, p. 97, 1911.

Case of woman who suffered since ten years from facial neuralgia, epileptic-like fits four or five times a month, intermittent neuresis, almost daily spells of vertigo, persistent buzzing and otorrhea in left ear. After the removal of a large rhinolith (6 gr.) occupying the supero-posterior part of the left nasal fossa, cure resulted. Ed.

127

Etiology of Nasal Endothelioma. M. GOGGIA, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 401, Sept., 1911.

The tumor was located in the middle meatus and was removed through the nose. Microscopically examined, it appeared to be formed of alveolar stroma of connective tissue containing endothelial elements in various strata, and colloid cells. There was neither recurrence of growth nor metastasis. LASAGNA.

130

The So-called "Hard Papilloma" of the Nose with Report of a Case in the Frontal Sinus. G. HERXHEIMER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 249, 1911.

Abstracted in THE LARYNGOSCOPE, p. 157, Feb., 1912.

132

Case of Nasal Sarcoma Removed by Intra-nasal Operation; Recurrence After Thirteen Years; External Operation and No Return After Three and a Half Years. C. H. KNIGHT.

Original contribution to THE LARYNGOSCOPE, p. 784, July, 1911.

133

Four Cases of Sarcoma of the Nose and Throat Treated with Coley's Toxins. S. H. LARGE, *Cleveland Med. Jour.*, p. 318, April, 1911.

Large reports four cases, in one of which injections of Colin's toxin were attended with very satisfactory results in that three years from the time of treatment there has been no recurrence. The patient had been operated twice for a tumor (round-celled sarcoma). Two weeks after the second operation, injections of Coley's toxin were begun, and kept up at intervals for almost a year,—until there was no longer evidence of recurrence of the growth.

Ed.

136

Nasal Polyp. C. C. McCULLOUGH.

Original contribution to THE LARYNGOSCOPE, p. 18, Jan., 1911.

137

Cavernous Angio-fibroma Penetrating the Nasal Septum. M. MEYER, *Arch. f. Ohrenh.*, Bd. 86, Heft 1-2, p. 137, 1911.

A little girl, aged 8, presented on the anterior part of her septum a tumor, the size of a hazel-nut, which occupied both nares in the fashion of septal abscesses. Removal under chloroform anesthesia. Microscopic examination; cavernous angio-fibromatous tissue.

Ed.

138

Treatment of Rhinoscleroma with Roentgen-rays. N. M. NEMENOW, *Arch. f. klin. Chir.*, Bd. 96, Heft 2, 1911.

Nemenow states that the beneficial results of the use of x-rays in the treatment of rhinoscleroma consists in their effect on the tissue cells. They precipitate vacuolation and hyaline degeneration.

Ed.

139

Intra-nasal Carcinomata. PIRIE and SKIRVING, *Edin. Med. Jour.*, Oct., 1911.

This paper consists of a short review of the subject, together with a report of a case. The patient was a woman, aged 43. The growth invaded the cranial cavity at a comparatively early stage and the first diagnosis was that of cerebral tumor with extension to the nasal sinuses. Death occurred eight months after the appearance of the first symptoms, and during the last three months of life there was marked proptosis of both eyes and complete blindness. The site of origin of the growth was uncertain, but it appeared to have been in the upper part of the left nasal cavity or in the left ethmoid cells. Histologically the growth corresponded exactly in type with some of those described by Donogány and von Lénart as cases of carcinoma baso-cellulare solidum—masses of cells of embryonal type, with marked regressive necrotic changes, but also with considerable polymorphism or metaplasia.

GUTHRIE.

143

Nasal Tuberculoma. F. ROCKENBACH, *Arch. f. Laryngol. u. Rhinol.*, p. 231, Bd. 24, Heft 2, 1911.

In 1900, Hasslauer reported forty-five cases of tuberculoma of the nasal septum. Since then twenty-five additional cases have been recorded. Rothenbach reviews these cases and adds four which he has personally observed during the last eight years. In one instance a long period of lupus preceded the tumor; in another lupus developed subsequent to its growth. In one patient the tumor was very large and involved the ethmoid sinus, tonsils and left ear. In the last case recorded, the tuberculous lesions involved also the lung, peritoneum and foot and rapidly terminated in death.

Ed.

145

Pathology and Therapy of Chondroma of the Nose and Accessory Sinus. SCHWERTFEGER, *Ztschr. f. Laryngol., Rhinol. u. ihre Grenzgeb.*, Bd. 3, Heft 6, p. 581, 1911.

The enchondroma which the author described was observed in a factory employee, aged 16 years. Its size was 6x3x5 cm. Swelling was apparent in the upper right canthus and in the middle meatus. A combination of Killian's frontal sinus operation and Denker's tumor-operation was used for removal of the growth. To date, five months after operation, no recurrence.

Ed.

148

Endothelioma of the Nasal Cavity. P. TONIETTI, *Arch. ital. di Otol., Rinol. e Laringol.*, p. 89, March-May, 1911.

Woman of 64 years. Occlusion of left naris, for the last eight years, due to tumor, which was partially excised but recurred. Radical operation followed by radium therapy. After two years' cure, recurrence. Histological examinations of sections obtain from the several operations revealed epithelioma.

Ed.

150

Carcinoma of the Naso-pharynx. C. M. BROWN.

Original contribution to THE LARYNGOSCOPE, p. 1069, Nov., 1911.

152

Fibroma of the Naso-pharynx with Report of Four Cases. W. B. CHAMBERLIN, *Ann. of Otol. Rhinol. and Laryngol.*, p. 683, Sept., 1911.
Abstracted in THE LARYNGOSCOPE, p. 1204, Dec., 1911.

153

Malignant Growth of Naso-pharynx. CHORAZYCHI, *Medycyna*, No. 17, 1911.

Case in a boy of 15 years. In spite of repeated partial operations of this nasal tumor, recurrence always occurred as well as hemorrhages. Ed.

154

Ten Cases of Primary Malignant Tumors of the Naso-pharynx (4 Sarcomata, 5 Carcinomata, 1 Endothelioma.) CITEILLI. *Ztsch. f. Laryngol.*, Bd. 4, Heft 3, p. 331, 1911, and *Bol. delle Mal. dell'Orecchio*, p. 189, Sept., 1911.

Citeilli recites the clinical histories in these ten cases, which confirm the well-known hopeless prognoses in these cases of malignant tumors. The endothelioma was in a woman of 45 years. The tumor was located behind the right orifice of the Eustachian tube; bled easily upon being touched, and had a regular surface. The pain grew gradually unbearably intense.

Ed.

159

Carcinoma of the Naso-pharynx in a Girl Aged 17. T. GUTHRIE, *Jour. of Laryngol., Rhinol. and Otol.*, p. 449, Sept., 1911.

The principal symptoms, in this case, were pain and nasal obstruction. On the left side of the neck a ganglionic mass was apparent. The left cheek and velum palati were edematous; transillumination of the left maxillary sinus showed it to be dense, while the right showed clear and normal. The case was diagnosed as a non-operable malignant sarcoma.

Histological examination by Dr. Glynn showed it to be a cancer of the round cells of medullary type. Carcinoma of the naso-pharynx is a rare affection. In a statistical study of 32,997 cases of naso-pharyngeal lesions, Moritz-Schmidt did not encounter one case.

Ed.

160

The So-called Fibrous Naso-pharyngeal Polypi; Location, Mode of Inspection and Treatment. P. HELLAT, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, No. 2, p. 329, 1911.

In a brief review the author states that all naso-pharyngeal fibromata have their origin at the base of the skull. After discussing the various cauteries used for their removal, Hellat concludes that our only means for successful eradication consists in surgical interference. The nasal, buccal and facial routes for their removal are discarded as too mutilating, without offering any advantages as to accessibility; the oral route (per vias naturales) is chosen because no new areas for infection are opened and the operation can be performed in several sittings and without necessitating absolute rest in bed; hemorrhage is also rapidly controlled.

Hedonal, intra-venously, is suggested as an ideal narcosis because a mask is not necessary, the sleep is continuous and quiet, there is no vomiting, no congestion of the head or respiratory organs, and there is good effect in all cases, even in those of drinkers. The contra-indications are deep, post-operative sleep and suppression of the reflexes admitting of respiratory complications.

KLEENE (STEIN).

169

Report of Three Cases of Fibrous Polyp of the Naso-pharynx. W. A. WELLS, *THE LARYNGOSCOPE*, p. 787, July, 1911, and *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 441, Sept., 1911.

Original contribution to *THE LARYNGOSCOPE*, p. 787, July, 1911.

171

Plea for an International Symposium on Ozena. A. ALEXANDER, *Arch. f. Laryngol. u. Rhinol.*, p. 378, Bd. 25, Heft 2, 1911.

To-day, in spite of all the work done in this field, ozena is still an enigma. The author points out all the things still to be learned about this disease,—its cause, nature, predisposing conditions, etc. Ed.

174

Congenital Occlusion of the Choanae. M. ATTAL, *These de Paris*, 1911.

Cases of congenital occlusion of the choanae are far from being rare. They may be either uni- or bilateral, osseous or membranous, complete or incomplete. The sensation of a resisting wall or of a depressible membrane upon probing, posterior rhinoscopy and digital examination, all point to such a diagnosis. Because of the frequent complication in the olfactory sense and hearing as well as the general debility produced, the prognosis is often grave, especially in the new-born, if both choanae be involved. They succumb quickly either by asphyxiation or debility due to obstruction to breathing and sucking. Therefore, immediate intervention is urgent. Treatment is relatively simple. If the occlusion be membranous, the galvano-cautery is used under guidance of a finger introduced into the naso-pharynx; if it be osseous, a gouge and mallet is employed. The patient is greatly relieved by this process if caoutchouc be used to keep open the newly-created passages. Ed.

177

Cyst-formation in Ala Nasi. K. BECK, *Arch. f. Ohrenh.*, Bd. 85, Heft 4, p. 304, 1911.

Man, aged 35 years. Since the last six months a fluctuating, semi-spherical swelling was apparent on the right ala nasi, projecting over the anterior part of the inferior turbinate and causing a bulging of the upper lip. By an incision four centimeters long, the tumor was removed; it was found to contain four centimeters of a brownish mucous liquid. Ed.

179

Swelling of Mucous Membrane of Anterior of Nose and Durability of Cure by Electrolysis. M. BRESGEN, *Passows. Beitr.*, Bd. 4, Heft 6, p. 439, 1911.

Bresgen reviews his former work on this subject and states that electrolysis is the most effective and least harmless means of combatting swellings of the interior nasal mucosa, even in cases in children. The author discusses in detail the indications and technic. Ed.

181

Lymphatic Apparatus of the Nose and Naso-pharynx in Relation to the Rest of the Body. J. BROECKAERT, *Presse Oto-Laryngol. Belge*, p. 193, Nos. 5-6, 1911 and *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 2, p. 291, 1911.

Published in THE LARYNGOSCOPE, p. 209, March, 1912.

182

Serum Diagnosis of Ozena. C. CALDERA and M. GAGGIA, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 474, Nov., 1911.

The etiology of ozena is still a debatable question. The theory as to its para-syphilitic origin is contradicted by the usually negative Wassermann reaction. The authors have vainly attempted to find specific antibodies in the serum of these patients. The conclusions are that there is in ozena no specific etiologic factors present. Ed.

184

Report of Two Cases of Tuberculosis of the Nose. W. B. CHAMBERLIN. Original contribution to *THE LARYNGOSCOPE*, p. 873, Aug., 1911.

185

Fibrinous Rhinitis. W. CHANEY, *Detroit Med. Jour.*, Sept., 1911.

Chaney's case, a man of 20 years, developed severe nose and throat symptoms following a thorough house-cleaning of a very dirty apartment. A culture revealed the Klebs-Loeffler-like bacilli.

The author reiterates Wishart's conclusions (1) That fibrinous rhinitis and diphtheria are not distinct diseases; and (2) that cases of fibrinous rhinitis should be isolated. Ed.

189

Mydriatic Ozena. L. R. CULBERTSON, *Ophthal.*, Oct., 1911.

From experience with numerous cases, Culbertson concludes that the odor which emanates from the nose of patients upon whom atropin is used, is due to the fact that atropin dries up the secretion and thus diminishes the formation of antibodies, which the author thinks exist in profuse number in the nasal secretion. Because of the absence of antibodies, germs develop. In each of the author's cases the odor disappeared the day following the application of atropin. Ed.

190

Cloretone and Acetozone Inhalated in Some Clinical Forms. DE BENEDETTI, *Arch. ital. di Otol. Rinol. e Laringol.*, Vol. 22, No. 3, p. 198, 1911.

In some forms of ozena the author has obtained very brilliant results by tamponing with cloretone and by inhalations of acetozone. Also in chronic laryngitis, in operations on the septum and the turbinates, cloretone gave an efficacious therapeutic result. LASAGNA.

191

Aprosexia of Nasal Origin. B. DELAGRANGE, *These de Paris*, 1911.

The oto-laryngologists find nasal aprosexia one of the complications in the syndrome of nasal obstructions. One of the most predominating clinical characteristic of aprosexia is inability to work. The disease is found both in the adult and in the infant. In the adult it may be due to a hypertrophic rhinitis, polypi, simple growths, deflection of the septum, depression of the alae nasi, etc. In infants the etiological factor is most often adenoid vegetation. Nasal aprosexia is found in adults who imagine they are physically abnormal and the melancholy which

then develops causes them to be classed at times as neurasthenics. Though nasal aprosexia is independent of deafness, it is often coincident with it. The author states that it should be suspected in children behind in their school-work and who are mouth-breathers.

There are three stages in the treatment: First of all the obstacle, nasal, naso-pharyngeal or pharyngeal, should be removed; then the general condition should be improved by proper tonics; after this, appropriate exercises should be given to re-establish normal breathing, and the intellect should be stimulated. Ed.

197

Morphology of Nasal Cartilage. L. FREUND, *Passows Beitr.*, Bd. 4, Heft 6, p. 414, 1911.

The only mammals in which the nasal cartilage had thus far been studied are man and the domestic animals. Freund adds to our knowledge by contributing data obtained from a study of this cartilage in a lion of 4 years and a grizzly bear, aged 2 years. Ed.

198

Rhinitis Sicca Post-operativa. E. P. FRIEDRICH, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, p. 263, Bd. 4, Heft 3, 1911.

Post-operative injury to the nasal cavity may be due to: (1) The use of the galvano-cautery; (2) turbinotomy or turbinectomy; or (3) resection of the middle turbinate and ethmoid cells. Friedrich details the disturbances due to each of these causes, and explains them. In all of the instances the nasal passage is so greatly widened that the inspired air is not sufficiently saturated nor warmed. Then, too, the mucous membrane is impaired and robbed of its secreting power due to extensive scar-tissue injury. Bone injury also plays an important part in the development of this condition; for thus pathologic secretions and ozena-like symptoms arise. Ed.

201

Lupus from the Rhinologists' Standpoint. P. H. GERBER, *Muench. Med. Wchnschr.*, p. 2501, Nov. 21, 1911.

Gerber illustrates and describes an instrument by which incipient lupus of the nose and face which has its beginning in the hidden nasal chamber may be detected. The instrument consists of an oblong mirror. Ed.

203

Examination of the Nose and Throat in Relation to General Diagnosis. H. Z. GIFFIN, *Boston Med. and Surg. Jour.*, p. 228, Feb., 1911.

The writer points out that the general practitioner pays little attention to the condition of the upper respiratory passages, while the nose and throat specialist is prone to attach too great a significance to the pathology of this region. He explains that catarrh, deafness, nasal obstruction, acute headaches with fever, chronic or periodic headaches, chorea, anemia, neuralgia, tumors of the face and neck, lues, and asthma, may be due to or influenced by the condition present in the throat, nose,

or accessory sinuses; and operative interference here may materially affect the issue. He adds the results in fifty-two cases of asthma which had some form of nasal operation done in the hope of relief, fifty-seven per cent were improved and ten per cent were cured; in thirty-three the general health was improved, and 24 of the 31 cases complaining of headaches, were relieved. He concludes that "examination of the nose and throat for diagnostic and therapeutic purposes should not be neglected. On the other hand these are not parts of the anatomy to be needlessly tampered with simply because they are accessible.

BERRY (MOSHER).

205

Etiology and Operative Cure of Collapse of the Alae Nasi. M. HALLE, *Jour. of Laryngol., Rhinol and Otol.*, p. 348, July, 1911.

Published in the *Archiv. fuer Laryngologie*, Band 23, No. 3, April, 1910, and abstracted in THE LARYNGOSCOPE, p. 395, April, 1911.

212

Examination and Treatment of the Naso-pharynx and Eustachian Tube by Aid of the Naso-pharyngoscope. E. M. HOLMES, *Ann. of Otol. Rhinol. and Laryngol.*, p. 29, March, 1911.

Holmes has devised a number of instruments specially adapted for the treatment of the naso-pharynx and Eustachian tube when used in conjunction with his naso-pharyngoscope. A series of twenty-four illustrated cases showing the pathological changes in the pharyngeal mouth of the Eustachian tube are described.

GOLDSTEIN.

216

Manikin For Mastering Technic of Nasal Examinations and Nasal Operations. E. JUERGENS, *Monatschr. f. Ghrenh. u. Laryngo-Rhinol.*, p. 833, Heft 7, 1911.

The author presents a durable and inexpensive manikin, which consists of an elastic mask molded to resemble the human face. The nasal cavity is supported by a hollow wooden framework which can be opened posteriorly. The interior of the nasal fossae, its various walls, turbinates, etc., are molded of this plastic mass. The septum consists of a wooden plate covered with a rubber membrane, the same being placed in position in the nose from behind. The various operative technics may be easily demonstrated with this manikin.

GOLDSTEIN.

219

Causes of Epistaxis in Childhood. L. G. KERR, *Am. Jour. of Obstetr.*, Oct., 1911.

Kerr classifies the causes of epistaxis as general and local. Under the former head he discusses hemophilia, purpura, scurvy, anemia, chlorosis, leukemia, syphilis, rheumatism, cardiac affections and malaria. Epistaxis may accompany infectious diseases; it is occasionally present in the latter part of an attack of nasal diphtheria. In some perfectly healthy children, however, profuse epistaxis results almost spontaneously, without any hereditary or other cause for it being ap-

parent. Under local causes Kerr first discusses trauma. He further mentions the presence of foreign bodies in the nose, acute rhinitis, ulcerations, variolities, severe catarrhal inflammations, violent exercise and excessive study as predisposing causes. All these, however, are found only in debilitated children. Ed.

220

Case of Congenital Atresia of the Choana. J. A. KOCH, *Med. Tijdschr. v. Genesck.*, Vol. 1, No. 22, 1911.

This condition existed in an infant of 11 months. Examination by means of a sound revealed an osseous diaphragm at a depth of about 5 cm.; choana invisible. At the site of the lower turbinates both sides of the vomer showed a very profound depression. Infant slept poorly; the purulent hypertrophied rhinitis constantly started up inflammation in the accessory sinus; it became urgent to establish nasal respiration. Some adenoid vegetation was removed, and the adrenalin-cocain applied to the inferior meatus; thus anesthetizing the septum and turbinates. By this procedure the osseous diaphragm became visible. It was opened and kept open with iodoform gauze. Three weeks after the first operation a second was performed on the other side. Complete cure in six weeks, with very marked general improvement and re-established nasal respiration. Congenital atresia of the choanae is a comparatively rare occurrence. Ed.

221

Some Observations Upon the Cribroform Plate and Olfactory Nerve in Man and Certain Animals. J. J. KYLE.

Original contribution to THE LARYNGOSCOPE, p. 1131, Dec., 1911.

225

Primary Chancre in Infected Naso-pharynx. LAVIELLE, *Jour. de Med. de Bordeaux*, Sept. 24, 1911.

Patient, aged 30, suffered for some time from pains in the head and left ear radiating to the right side of the head. Tumor, the size of a nut, found at posterior right angle of jaw. By posterior rhinoscopy a grayish ulcer was seen. The posterior naso-pharyngeal wall was infiltrated, the ulcerous cavity felt hard, thick and sharp to the touch. Definite characteristic roseola on chest. Diagnosis: primary chancre infecting naso-pharynx. Ed.

231

Contagion of Leprosy Through the Nose. EMILIO MARTINEZ, *Rev. de Enf. de la Garganta, Nariz y Oides*, April, 1911.

This paper was presented by the author to the Second Cuban National Medical Congress, with the purpose of pointing out the danger of contagion of leprosy by nasal secretion. Two hundred cases of suspicious leprosy reported to the commission of infectious diseases were examined and 153 returned as positive of leprosy and in all cases the mucous membrane of the septum demonstrated evidence of ulceration; in many of them this ulceration was the only proof of the disease, the patients having

been disseminating bacilli without suspicion of the danger to the community. The author examined all cases by sunlight, projecting it into the nose with a frontal mirror. In some instances it was possible to use the sunlight for transillumination, sending it through one fosa and observing the other by the speculum. A thickening of the septum or hemorrhagic deposit could easily be seen by this method. A. A.

240

Endo-nasal Origin of Lupus of the Face. E. PISTRE, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 120, No. 2, 1911.

Pistre wishes to assert his claim of priority to a study of this infection which he disputes with Dresch. As to the spread of tuberculosis and lupus, the author states that the former is limited to those parts of the body poor in lymphatic tissue and that the latter abounds in those rich in lymphatic tissue, which, thanks to its phagocytic character, permit only the development of a benign lupus. Ed.

241

Relations of Lymphatic Apparatus of Nose and Naso-pharynx to the Rest of the Body. C. POLI, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 2, p. 253, 1911, and *Arch. ital. di Laringol.*, p. 160, Oct., 1911.

Published in the March, 1912, issue of THE LARYNGOSCOPE, p. 184.

242

Simultaneous Bilateral Nasal Operation and Their Post-operative Treatment. L. POLYAK, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 293, 1911.

Polyak feels that nasal operations should only be performed in a hospital. Under such conditions immediate rest in bed makes it possible to dispense with the tamponade and also to perform, if necessary, a more extensive bilateral operation in one sitting. The wound should be left alone; no cautery, spray nor pulverized substance should be used. It has been found that this post-operative procedure results in less hemorrhage, as well as enabling the patient to breathe through his nose immediately after the operation. Ed.

243

Scab-formation in the Nose. W. P. PORCHER, *N. Y. Med. Jour.*, p. 420, Aug. 26, 1911, and *Jour. S. C. Med. Ass'n.*, Nov., 1911.

Scab formations in the nose are believed to result from the action of respired air on inflammatory secretions from the nasal sinuses. The treatment, therefore advised, is free drainage of all secretions involved and the administration of increasing doses of potassium iodid to increase the fluidity of the secretions. EDGAR (GOLDSTEIN.)

244

Occlusion of Hypo-pharynx by a Cicatricial Glossc-pharyngeal Diaphragm Caused by Syphilis. G. PROTA, *Arch. ital. di Laringol.*, p. 12, Jan., 1911.

The hypo-pharynx was entirely closed by this cicatricial diaphragm. The stenosis was conquered by gradual dilatation. Ed.

246

Relation of Ozena and Tuberculosis. RABASSA and SANTINA, *Rev. Barcel. de Enfirm. de Oido, etc.*, March 31, 1911.

Fundamentally ozena and tuberculosis are entirely different. But ozena may precipitate the development of tuberculosis by preventing the nose from properly sterilizing the inspired air, and by weakening the general and local condition to such an extent that if the tubercle bacilli penetrate into the submucous lymphatic tissue, the resistance is almost nil. Ed.

248

Genetic and Functional Relation Between Nose and Teeth. W. RICHTER, *Arch. f. Laryngol. u. Rhinol.*, p. 481, Bd. 24, Heft 3, 1911.

The author states that the teeth and nose are closely related developmentally, and causes obstructing the growth of the former also retard the latter and vice versa. Richter discusses the mechanical causes of alveolar and maxillary anomalies, and their therapy. Ed.

249

Chronic Nasal Stenosis and Collapse. M. ROSENBERG, *Arch. f. Laryngol. u. Rhinol.*, p. 9, Bd. 25, Heft 1, 1911.

Rosenberg has examined fifty patients with nasal stenoses for indurating processes on the apexes and has found such processes in eighteen cases. These he feels are due to the repeated inflammations of the right apex of the lung caused by the inspiration of impure air in mouth-breathing. Though the induration is secondary to the nasal stenosis, still attention must be given to it, lest tubercular infection result. The therapy consists in removing the nasal stenosis and giving a "fresh-air cure." A review of the literature is also appended. Ed.

254

Unusual Case of Anosmia. J. SAFRANEK, *Orvosi Hetilap*, No. 17, 1911.

Girl of 16 years suffering from leukoderma vitiligo. During the last two years her olfactory sense has gradually decreased, and general bilateral anosmia and loss of taste developed. Neither examination of the nose nor general examination revealed the cause of the anosmia, yet it was certain that it was neither mechanical (respiratory) nor functional (hysteria). No central nor peripheral disturbance in the olfactory nerve could be determined. Safranek raises the question of the probable connection between the anosmia and the pigment-atrophy. Ed.

255

The Lateral Wall of the Cavum Nasi in Man, with Especial Reference to the Various Developmental Stages. J. P. SCHAEFFER, *Ann. of Otol., Rhinol. and Laryngol.*, p. 277, June, 1911.

This extensive study includes: (1) a brief description of the developmental stages of the nasal fossae; (2) the detailed embryology of the lateral walls of the nasal fossae; (3) the gross anatomy of the lateral walls as presented in the term fetus and the young child; (4) the adult

lateral walls with especial reference to some later developmental changes. The materials used in this investigation include the following: (a) human embryos at successive ages from twenty-one days up to the fetus at term; (b) fifty lateral nasal walls of new-born children; (c) twenty lateral nasal walls of children, ranging in age from birth to fifteen years; (d) 150 adult lateral nasal walls, ranging in age from fifteen to eighty-eight years; (e) embryologic and adult specimens of the lateral nasal wall of the cat, dog, muskrat, woodchuck, skunk, monkey, pig, sheep, and cow. A few of the conclusions reached are the following: 1. The nasal anlage establishes itself about the third week of embryonal life as localized thickenings of the ectoderm, located on both sides of the outer surface of the wall of the fore-brain, immediately superior to the primitive oral fossa. 2. From three to five ethmoidal conchae become differentiated before birth. 3. The sinus paranasales all develop from preformed furrows or pits, with the single exception of the sinus sphenoidal—in which is primitively nothing but a constriction from the dorsal and superior portion of the nasal fossa. 4. We should consider the adult ethmoidal region as usually presenting three conchae rather than two. 5. The sinus maxillaris has an accessory ostium communicating with the meatus medius directly in 42.4 per cent of cases. 6. In the adult the sinus frontalis may communicate with the meatus nasi medium in one of the following ways: (1) the naso-frontal duct or the sinus frontalis may open directly into the meatus medius; (2) it may be directly continuous with the infundibulum ethmoidale; (3) or it may be continued down to the infundibulum ethmoidale and meet the latter structure at varying angles; (4) the sinus may have two naso-frontal ducts which in turn may have either of the above relations with the cavity of the nose.

EDGAR (GOLDSTEIN.)

256

Variation in the Anatomy of the Naso-lacrimal Passages. J. P. SCHAEFFNER, *Ann. of Surg.*, Aug., 1911.

The author has investigated variations in the size, position, direction of the component parts of the naso-lacrimal passages. He presents interesting photographs of blotting paper reconstructions of two adult naso-lacrimal passages, these being virtually casts of this area. GOLDSTEIN.

262

Remarkable Case of Intra-nasal Destruction from Disease Without Any Deformity. O. J. STEIN.

Original contribution to THE LARYNGOSCOPE, p. 964, Sept., 1911.

263

Medial Nasal Fistula. H. STREIT, *Arch. f. Laryngol. u. Rhinol.*, p. 454, Bd 24, Heft 3, 1911.

Boy, aged 8 years; deep fistula ($1\frac{1}{2}$ cm.) beneath dorsum nasi leading to lower margin of the ossa nasalia. Child was born with a slight prominence on the bridge of the nose, which attained the size of a cherry when the child was 5 months old, and was removed. A resulting fistula

was ineffectively cauterized after $1\frac{1}{2}$ years to produce healing; at the end of six years total excision of fistula. Microscopic examination; membrane composed of sweat-glands, sebaceous glands and hair follicles which were situated as far as $1\frac{1}{2}$ cm. below the epithelium. In this case there was no recurrence within a year. Cauterization is not satisfactory, in that it may provoke closure of the fistula while, underneath, the process may continue. In fact if the treatment is to be thorough a disfiguring cicatrix is apt to result.

Ed.

268

Dacryocysto-rhinostomia (Toti's Operation). E. TOEROEK, *Arch. f. Ophth.*, May, 1911.

Toeroek states the disadvantage of excising the lacrimal duct and tells of the unsatisfactory attempts of making a new duct for the tears through the bony wall of the nose, until Toti (1904) discovered a method of keeping open this passage in the nasal mucosa. The technic is fully described. Toti tried this method on 39 cases; in 23 the results were perfect; in 16 slight tearing. Schirmer reports 5 successful cases out of 8, and Salus succeeded in 6 of 11 cases. The author performed the operation in 9 cases; 6 were perfectly cured, in 2 there was slight tearing. He recommends warmly this technic.

Ed.

269

Spasmodic Epistaxis in a Gouty Patient. A. TRIFILETTI, *Arch. ital. di Laringol.*, p. 53, April, 1911.

Case of woman, aged 50, gouty, who suffered from epistaxis recurring during four or five days in spite of antero-posterior tamponade. Schneider's mucous membrane was intensely congested as well as the posterior pharyngeal wall. Since there was no local cause to explain this epistaxis the author reasons that it is simply concomitant with the gout.

Ed.

270

Multiple Abscesses of the Nasal Submucosa in a Case of Leukemia. J. P. TUNIS, *Am. Jour. of Med. Sci.*, Jan., 1911.

The case was studied by the author in the autopsy-room of the Allgemeines Krankenhaus, in Vienna. The clinical diagnosis was diathesis hemorrhagica, with well-marked anemia, atrophy of the bone-marrow, and lobular pneumonia. The notes of rhinological interest were as follows: There was infiltration of the gums, with gangrene of the upper jaw in the incisor region; leukemic infiltration of the nasal mucosa, with narrowing of the nasal chambers. There was a hemorrhage into the very large sphenoidal sinus. Numerous punctate hemorrhages over the entire nasal mucous membrane. The author examined the nasal mucous membrane microscopically. He found it the seat of numerous small purulent foci. He also gives in his article the notes of another autopsy on a man dying of pneumonia with leukemia. The microscopic picture of the nasal mucous membrane was characteristic of chronic inflammation. PACKARD.

271

The Lymphatic Apparatus of the Nose and Naso-pharynx in Its Relation to the Rest of the Body. A. L. TURNER, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 2, p. 265, 1911, and *Edin. Med. Jour.*, p. 409, Nov., 1911. Published in *THE LARYNGOSCOPE*, p. 197, March, 1912.

274

Primary Tuberculosis of the Nose. C. D. VAN WAGEMEN. Original contribution to *THE LARYNGOSCOPE*, p. 869, Aug., 1911.

276

Case of Greatly Retarded Respiration Following Nasal Disease. S. VON STEIN, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 3, Heft 6, p. 725, 1911.

Little girl of 11 years presented peculiar dyspnea which consisted in deep and laborious inspirations and a rhonchous rhythm during five respirations every minute. Hypertrophic rhinitis and adenoid vegetation occupying one-third of the choanae. Cauterization of the turbinates and of the adenoid tissue was without avail; normal respiration after the removal of the adenoids. It is the author's opinion that no similar case has been recorded. The author illustrates the respiratory act before and after the operation by means of five photographs. Ed.

282

Plague and the Nose. C. ZIEM, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 705, June 24, 1911.

From a thorough study of all the available material on the subject—going back to earliest times—Ziem concludes that the pest is not transmitted through sting of the flea, but through a miasmatic infection of the nasal and pharyngeal mucous membrane, assisted by unhygienic conditions. Ed.

283

Operative Treatment of Hay-fever by Bilateral Resection of the Anterior Ethmoid Nerve. T. ALBRECHT, *Deut. med. Wchnschr.*, July 27, 1911.

The operative treatment of hay-fever by bilateral resection of the anterior ethmoid nerve is an intervention based on insufficient anatomical and physiological hypotheses. The therapeutic result is indefinite because of the possibility of operative injury to the neighboring tissues.

In seeking the route of the centripetal irritation we must consider not only the N. nasociliaris but also the Nn. palatini and nasalis post. of the second trigeminus and N. infra-orbitalis. The hay-fever may also originate in the air passages or bronchial mucosa. Resection of the N. nasociliaris does not remove all reflex irritation; resection of the anterior ethmoidal foramen does not effect the nerve trunk but merely one of its branches, namely the N. ethmoidalis ant. The N. infratrochlearis is also unaffected. If improvement in the dyspnea took place after resection of the ethmoid nerve, the conclusion was that the condition was of reflex nasal origin. Ed.

287

Vibrating Massage in Rhinology and Laryngology. N. R. BLEGVAD, *Ugeskr. f. Leger*, June 1, 1911.

Blegvad reports good results from the use of Storch's apparatus in the treatment of fifty-six patients suffering from nasal and pharyngeal diseases.

Ed.

294

Dysmenorrhea Relieved by Nasal Treatment. J. BRETTAUER, *Am. Jour. of Obstetri.*, Aug., 1911.

Brettauer advocates nasal treatment for cases of dysmenorrhea not apparently due to any gynecological condition. He asserts that nausea, vomiting and pains in the iliac region often disappear after the application of a 20 per cent solution of cocaine to definite area of the nasal mucosa. In a paper published by Dr. Wilhelm Fliess, in 1897, attention had been called to the fact that certain areas in the nose—the tuberculum of the septum and the anterior half of the lower turbinate—always become swollen, hyperemic and bleed easily upon the slightest touch during the menstrual period; all of these symptoms promptly disappear after the cessation of the period. Brettauer details the histories of five cases in which the results of cauterization were very satisfactory. Other authors also have reported cases in which permanent relief was obtained by means of trichloroacetic acid, galvano-cautery, or bipolar electrolysis, or by other rhinological treatment—removing spurs, enlarged turbinates, etc.

Ed.

295

Treatment of Nasal Synechia. BRINDEL, *Rev. hebdomadaire de Laryngologie, d'Otologie et de Rhinologie*, p. 33, July 8, 1911.

Brindel regards cauterization with chromic acid as an unfailing remedy, in preventing reunion of synechias.

Ed.

296

Removal of the Lacrimal Sac with Nasal Drainage Without Apparent Cicatrix. J. BROECKAERT, *Presse Oto-Laryngologique. Belge*, p. 388, Sept., 1911.

The author's operation is distinguished from others more or less similar by the total absence of cicatrices due to an incision into the lacrimal caruncle. Only the conjunctiva is incised and sutured, and the osseous canal is dilated. This simple procedure is indicated among other cases in those in which there is complete obstruction of the lacrimo-nasal canal following fracture of the nasal bone. It can be performed under local anesthesia and healing is rapid. Cases in which this operation was successful are cited.

Ed.

297

Correction of Nasal Deformities by Mechanical Means and Bone Transplantation. W. W. CARTER, *Med. Rec.*, Dec., 1911.

The author describes his own mechanical bridge and intranasal splints. In recent fracture cases, the bony structure of the nose is thoroughly mobilized and the hard-rubber splint or splint molded from gutta-percha

is introduced into the nose by means of a suture which is passed from within the nose through the cartilaginous dorsum just below its attachment to the nasal bones. This operation is repeated on the opposite side and the splints are adjusted to the roof of the nose. The bridge is then applied externally and the wings, the edges of which have been previously padded with gauze, are adjusted by means of the thumb screw, so as to give proper support to the base of the nasal triangle. The dorsum of the nose is then pulled up into its proper position by means of the intra-nasal sutures, and the latter are tied together over the bridge. The instrument is left in position for two weeks. If the bridge is anchored to the forehead by means of adhesive plaster, the patient need not remain in bed after the second day.

In nasal deformities attended by loss of bone, the bridge splint is inadequate, as there is nothing to retain the shape of the nose after removal of the bridge. They are unsuitable for paraffin, as there is no solid foundation upon which the latter can rest. In these cases the author has resorted to an autoplasmic operation. He removes a portion of the ninth rib; molds it to suit the contour of the nose, and transplants this section of bone to act as the nasal support. He selects this rib, at about its middle portion, because of its shape and structure, the slight curve being an advantage. At this site it is thinly curved by muscle, and can be readily shelled out of its periosteum. A description of the bone-transplantation is given in detail, and well illustrated. The author mentions nine cases in which this operation was performed with good results. Photographs of some of these patients accompany the article. The results speak well for the future appearance of these unfortunate individuals.

LEDERMAN.

298

Transplantation of Bone for the Correction of Depressed Deformities of the Nose, with Report of Cases. W. W. CARTER.

Original contribution to THE LARYNGOSCOPE, p. 94, Feb., 1911.

300

Currents of High Frequency; Therapeutic Results. M. CASTEX, *Revue hebdomadaire de Laryngologie, d'Otologie et de Rhinologie*, Aug. 5, 1911.

In ozena the application of currents of high frequency failed in three and was successful in seven cases. The method was used with success in four cases of rhinorrhea, the results being more rapid than in ozena. In ear cases it was without benefit even in tinnitus. SCHEPPEGELL.

302

Cosmetic Surgery. C. M. CORR, *Vt. Med. Monthly*, Aug., 1911.

The paper takes a stand in favor of plastic surgery for the correction of external deformities about the eyes, nose, and mouth, and refers more in detail to the different forms of nasal deformities and the method by which each is to be combatted. Of these, "the conditions which we are most often called upon to correct are nasal humps, sunken bridges, turned-up noses, angular deformities, bulbous ends, thickened wings,

and defects by surgical operations, or as the result of malignant disease."

In discussing the treatment for sunken noses, the author favors parafin protheses, and says of the use of human cartilage placed under the skin, that "the method has many advocates but the results are far from symmetrical." After referring briefly to the methods used to correct these various deformities, he closes with the expression of his belief that "this is a legitimate field of work and far removed from that of the beauty doctor."

BERRY. (MOSHER.)

307

Action of Iodo-thiocinnamine on Exuberant Cicatrices in Nasal Cavity Following Trauma. E. FABRI, *Boll. delle Mal. dell'Orecchio della Gola e del Naso*, p. 80, April, 1911.

Fabri points out the good results which have been obtained in the treatment of peri-articular cicatrices by thiocinnamine and reports a case in which trauma caused cicatricial stenoses due to adhesion of the ala nasi to the septum. After forty intramuscular injections of thiosinamin supplemented by daily application to the cicatrix of tampons dipped in iodo-thiocinnamine, retraction and re-establishment of the permeability of the nose resulted.

Ed.

309

Substitute for the Nasal Septum. FRANGENHEIM, *Bruns Beitr.*, Bd. 63, p. 255, 1911.

Frangenheim describes the best-known of the many procedures. Usually remnants of the cartilaginous septum may be used for this purpose, in conjunction with upper-lip tissue. Frangenheim also mentions that Lexer tried to build a septum by cartilage-transplantation from the ear. The author then describes his own procedure employed in two cases: In one case he cut a strip of the cartilaginous septum (1 cm. wide) in such a manner that a supporting bridge remained and then united it with a portion of the septum. In a second case the cartilago-vomeronasalis was united with the crista nasalis to form the septum.

310

Further Observations on the Treatment of Hay-fever by Hypodermic Innoculations of Pollen Vaccines. J. FREEMAN, *Lancet*, Sept. 16, 1911.

Sixteen of the twenty cases of hay-fever which Freeman treated by inoculations of pollen vaccine showed beneficial results. The most satisfactory vaccine was that obtained from the pollen of timothy grass. The author discusses the method, dosage and also the fact of varying the pollen to meet individual cases.

Ed.

311

Various Forms of Snuffing, with Especial Reference to the Indications for Nasal Operations. FROESCHELS, *Wr. med. Wchnschr.*, No. 3, 1911. Abstracted in *THE LARYNGOSCOPE*, p. 293, March, 1912.

314

Chronic Influenzal Rhinitis Promptly Improved by Vaccine Therapy. C. C. GRANBY, *Jour. A. M. A.*, p. 264, Jan. 28, 1911. Abstracted in *THE LARYNGOSCOPE*, p. 691, June, 1911.

319

Rhinoplasty. O. HILDEBRAND, *Berl. klin. Wchnschr.*, July 17, 1911.

Operative replacement of bony cartilaginous and membranous septum (syphilitic) by a flap of skin, periosteum and bone got from the forehead. Two cases are reported. The article is illustrated, and the technic fully detailed. Ed.

320

Cure of a Case of Rhinoscleroma with Salvarsan. HOELSCHER, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, No. 3, p. 526, 1911.

A typical extension of the disease of seven years' duration, involving the right inferior turbinate, larynx and trachea to its bifurcation and producing considerable obstruction to breathing, was found in a Russian tailor, 25 years old. Luetic infection denied; Wassermann, negative. The diseased turbinate having been removed with conchotome, curette and cautery, an intravenous injection of 0.4 salvarsan was given, leaving larynx and trachea undisturbed. Immediate improvement followed in the operated area and the patient was discharged two weeks after admittance to the hospital. Five weeks later no trace of the disease could be found anywhere, there was no shrinkage from cicatricial contraction in the larynx nor trachea, and respiration was free and unmolested. STEIN.

324

Treatment of Ozena by the Submucous Injection of Paraffin into the Nasal Septum, with a Review of Other Methods. H. KAHN.
Original contribution to *THE LARYNGOSCOPE*, p. 737, June, 1911.

325

Successful Case of Cartilage Transplantation for the Prevention of Perforation in Submucous Resection. ISABELLE D. KERR, *Woman's Med. Jour.*, Jan., 1911.

Fearing a perforation in a nasal septum in which the mucous membranes were inflamed, adherent, friable and difficult to separate from the cartilage and already denuded on both sides from chronic ulceration, Dr. Kerr utilized a piece of cartilage, which was removed in a submucous resection on the patient, and transplanted it to the site of the perforation. In ten days the cartilage had completely filled the opening and no cartilaginous area could be seen. Seven months later, the mucous membrane presented a healthy appearance. SCHEPPEGRELL.

326

Peroral Intubation for Operations on the Nose, Mouth and Throat. W. KOELLE, *Deut. Ztschr. f. Chir.*, March, 1911.
Abstracted in *THE LARYNGOSCOPE*, p. 89, Feb., 1912.

329

Exposure of the Naso-pharynx by Slitting the Lower Jaw and Separating the Soft from the Hard Palate. A. KROGIUS, *Zntribl. f. Chir.*, March 25, 1911.

Krogus reports two cases successfully operated upon for removal of a fibroma in the naso-pharynx by a technic which the author worked out several years ago on the cadaver. A median incision is made in the lower jaw; the two halves thus may be turned back on each side and the tongue drawn down over the cleft. The soft palate is separated from the hard palate by a long incision, so that the former may be drawn down on the tongue. Thus free approach is got to the naso-pharynx. Ed.

337

Three New Plastic Operations on Nose and Throat. J. E. MACKENTY, *Med. Rec.*, Nov. 25, 1911.

MacKenty reports on three distinct classes of cases: Plastic operation in obstructions of the anterior nares; those following nasal septum operations in children; and plastic operations in atresia of the soft palate and posterior pharyngeal wall. The technic of each is fully described. Ed.

338

Safe and Rapid Procedure for Submucous Resection of the Defected Nasal Septum, with Presentation of a Septal Forceps. MACWHINNIE. Original contribution to THE LARYNGOSCOPE, p. 1091, Nov., 1911.

343

Submucous Resection for the Correction of Septum Deflections With a Description of the Author's Special Instruments. M. METZENBAUM. Original contribution to THE LARYNGOSCOPE, p. 86, Feb., 1911.

344

New Uses of Serotherapy in the Treatment of Spasmodic Rhinitis. MIGNON, *Bull. d'Oto-Rhino-Laryngol.*, p. 192, July 1, 1911.

Mignon reports the case of a young girl who could not come in contact with the odor from a stable without experiencing a severe attack of spasmodic rhinitis. The odor of the horses was evidently the cause of these attacks. This young girl contracted diphtheritic angina for which an injection of ten ccm. of Roux' serum was given. Immediately very severe symptoms of spasmodic rhinitis set in and the respiratory disturbances, cyanosis and dispnea were so severe that death seemed imminent. In a short time, however, all these symptoms cleared up. On the following days very small doses of the serum were administered without any ill effects. The patient soon recovered entirely. Ed.

345

Hexamethylenamin; A Remedy for Common Colds. A. MILLER, *Jour. A. M. A.*, June 10, 1911.

Miller has found that hexamethylenamin has a prompt and effective action in common colds, in that the watery secretion of coryza and the

fever, aching and malaise of influenza disappear. Miller points out that it is essential to use this therapy in the early stages of the attack. As initial doses he prescribes twelve grams in twelve powders of fifteen grains; one powder to be taken in a glass of water four times per day. To lessen bladder-irritation—the only ill effect—copious water drinking is advised. Ed.

347

Treatment of Rhinophyma. PELS-LEUSDEN, F. *Ther. Monatsch.*, Jan., 1911.

The author discusses the various methods of treating rhinophyma and recommends Stromeier's method of decortication. The technic is detailed. In this way a complete recovery is effected in ten to twelve days. Ed.

348

New Therapy for Tuberculosis and Lupus of the Upper Respiratory Tract.

S. A. PFANNENSTIEL, *Zntribl. f. ges. Ther.*, Jan., 1911, and *Prag. med. Wchnschr.*, No. 6, 1911.

Pfannenstiël's method has an underlying principle the formation of a bactericidal body within a living tissue. Doses of INa are given and ozone applied locally; whereupon iodine is set free. This therapy is strongly recommended in nasal tuberculosis. Ed.

351

New Rhinoplastic Process with Metallic Plates; Technic. T. RAYNAL, *La Clin.*, Aug. 18, 1911, and *Jour. de Med. de Brux.*, No. 34, 1911.

The author uses a silver plate placed between the two flaps. The deep median flap is made like the Indian method, stress being laid on including the periosteum; the other, superficial flap, is made after the Tagliacozzi manner, from the arm. The metal plate is perforated, allowing the two inner surfaces to unite through the perforations; the nutrition of the superficial flap is assured by the blood vessels of the deeper flap passing through the perforations. Cicatricial contraction is largely overcome, because the cut surfaces are placed in contact, and healing is not retarded by sloughing, which occurs in so many other methods heretofore employed.

GOLDSTEIN.

355

Bacteriology in the Treatment of Coryza. ROSENTHAL, *Rev. de Pharmacol. med.*, April, 1911.

In the nasal secretion of a patient with simple coryza, Rosenthal found a predominance of the cocco-bacillus of Pfeiffer, and also the pseudo-diphtheritic bacillus and the diplococcus pharyng. flavus. The author feels that more attention should be paid to coryza for it is an infection which leads, at times, to accessory sinus infection, infectious alveolitis nasal diphtheria, rhino-sinuso-meningeal infection, and indirectly to cerebro-spinal meningitis. Ed.

356

Treatment of Lupus of Mucous Membrane. M. SENATOR, *Deut. med. Wchnschr.*, No. 5, 1911.

According to Senator, the nose and throat are involved in every case of lupus, even though the affection is apparently merely cutaneous. Surgical removal of the diseased area is the most effective therapy. Pregnancy has a very unfavorable effect upon the development of the disease, and measures for its prevention or interruption are indicated in lupus of the upper respiratory tract. Ed.

358

New Technic for Rhino-plasty. SGAMBATI, *Riv. Osped.*, April 1, 1911.

Sgambati describes a modification of Nelaton's method, by which the nose is reconstructed by means of costal cartilage. The technic is fully detailed and several cases reported in which a new nose has been successfully constructed for patients in whom even the bony framework of the nose was missing. Ed.

362

Importance of Wassermann Reaction in Rhinology STRANDBERG, *Hospitaltidende*, May 17, 1911, and *Berl. klin. Wchnschr.*, Aug. 21, 1911.

Strandberg reports a case of tumor of the nose. The histological diagnosis pointed to tuberculosis, but the Wassermann proved positive. An antiluetic treatment was instituted and rapid recovery ensued. Ed.

363

Pfannenstill's "Two Route" Method of Treating Lupus of the Nose. O STRANDBERG, *Berl. klin. Wchnschr.*, Jan. 23, 1911, and *Jour. Russe des Mal. cut.*, Jan., 1911.

The author recommends, warmly, Pfannenstill's method of treating lupus of the mucous membrane; which consists of: administering Na per os (3 grams); applying, locally, on the mucosa a gauze-tampon dipped in peroxide. This unites with the sodium iodid eliminated by the mucosa ($2 \text{ INa} + \text{H}_2\text{O}_2 = 2 \text{ NaOH} + \text{I}_2$) and gives pure iodid which is a bacteriocid and disinfectant. The author has thus treated thirteen patients having tuberculosis of the nasal mucosa. In all these cases the Pirquet reaction was positive; the Wassermann negative. In twelve cases the cure was complete. The treatment lasted from five days to three months. Experiences with INa alone gave no results. In one case in which the Wassermann was positive and in which a nasal ulceration would not yield to specific treatment this therapy produced cicatrization. Ed.

370

Window-resection of Naso-lacrimal Duct in Cases of Stenosis. J. M. WEST, *Arch. f. Laryngol. u. Rhinol.*, p. 62, Bd. 24, Heft 1, 1911.

For stenosis of the naso-lacrimal ducts West resects, by the nasal route, a piece of the os lacrimale and os maxillare. Seven cases were treated in this manner; of these five were cured and two were very much improved. Ed.

371

Injuries of the Head and Nasal Diseases. C. ZIEM, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.* p. 45, Jan., 1911, and *Jour. of Laryngol., Rhinol. and Otol.*, p. 127, March, 1911.

Ziem calls attention to various affections which arise from fracture of the skull and can only be cured, or at least improved, after nasal treatment. He cites three cases in his own practice, relating respectively to two soldiers thrown from their horse and to a workman having fallen from a height of about sixty feet. In all of these cases the bony walls of the nasal cavities were more or less fractured; these lesions were not attended to until the patients came under the author's care. After irrigation of the nose, as well as of the post-nasal space, with various cannulae, allowing all these cavities to be cleansed thoroughly, improvement and partial recovery resulted. MUNCH.

373

Further Series of 81 Consecutive Cases of Cleft Palate Treated by Operation. J. BERRY, *Brit. Med. Jour.*, Oct. 28, 1911.

In fifty-nine of the cases both the hard and soft palate were involved. In fifty-eight of these union of the soft palate occurred after the first operation; one case had to be operated twice. It occurred in an infant of 14 months and was a complete double cleft of whole palate. Of the twenty-nine cases in which the cleft was limited to the soft palate, complete union took place in seventeen cases after the first operation; three cases were uncompletely healed; nine were unsuccessful. Ed.

377

Large Adenoma on the Superior Velum Palati in Epitheliomatous Degeneration. CORNET, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 27, No. 1, 1911.

A woman, 27 years old, presented herself with the following history: On the previous day she had been seized with a violent coughing spell during which a fleshy mass protruded into her mouth, which, however, returned into the throat after the cough ceased. For some time she had experienced slight difficulty in breathing and occasionally expectorated a little blood in the morning, but her general health was very good. Examination revealed an irregular reddish tumor, the size of a small hen's egg, suspended behind the free border of the velum, attached to the anterior surface of the palate. It was removed under cocaine anesthesia with the patient in the Rose position. Recovery was rapid and complete. Histological examination proved the growth to be an adenoma undergoing epitheliomatous degeneration. Ed.

392

Hemorrhage After Tonsillectomy. HARRY A. BARNES, *Boston Med. and Surg. Jour.*, p. 153, 1911.

After describing his technique in the enucleation of a tonsil, the author describes the three methods of controlling a severe hemorrhage, short of ligating the carotid. In the order of preference, these are: (1) By pressure, (2) by ligating the bleeding point, and (3) by suturing the tonsillar pillars with the Mosher needle. BERRY (MOSHER.)

398

Complications After Adeno- and Tonsillectomy. S. M. BURACK, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 3, Heft 5, p. 477, 1911.

Burack reports on a study of 2,000 cases; three per cent of the patients were middle aged. In only three of the tonsillar cases dangerous hemorrhages occurred, which were checked respectively with a Mikulicz compressor, by the fainting of the patient, and by prolonged digital compression. Five of the adenotomies developed severe hemorrhages. Nasal plugging and removal of a tag checked two cases. Some of the complications following adenoid removal are: Injury to uvula, septic infection purulent otitis media (if the child had a purulent rhinitis) catalepsy, laryngeal spasm, paresis of the soft palate, peri-tonsillar abscess, loss of teeth. Ed.

399

The Diseased Tonsil and Its Effect Upon the General System. W. P. CAVEN, *Dom. Med. Monthly*, Oct., 1911.

The writer dwells upon the importance to the general practitioner, of closer attention to the tonsil as a causative factor in disease. Deformities, especially of the chest, general lack of development both mentally and physically, are largely induced by the naso-pharyngeal obstruction caused by enlarged tonsils and adenoids. Constitutional affections, such as lymphatic tuberculosis and acute articular rheumatism are very closely related to the diseased tonsil, and the author is strongly of the opinion that if these were found and removed at the proper time, tuberculous and otherwise infected glands of the neck, and many cases of apical pneumonia, as well as rheumatic and other affections of the serous tissues, and many of the infectious fevers might be prevented. WISHART.

400

Supplementary Pharyngeal Tonsil. C. CHAUVEAU, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 532, March, 1911.

Report of a case in a child of 8 years in whom direct inspection showed in the posterior part of the pharynx a whitish-red tumor of irregular aspect, similar to ordinary tonsillar tissue. It had an oval shape, thinned toward the edges and infringed on the pharyngeal plane over an area of about one centimeter. This tumefaction joined itself to the adenoid tissue of the naso-pharynx without distinct lines of demarcation. It presented all the characteristics of adenoid tissue and its unusual location was enough to label it as such. Ed.

401

Report of a Case of Sarcoma of the Tonsil in a Young Child. L. C. CLINE.
Original contribution to THE LARYNGOSCOPE, p. 153, March, 1911.

402

Metastatic Suppurative Focal Pneumonia After Tonsil Abscess. F. COHN,
Berl. klin. Wchnschr., May 29, 1911.

This condition was present in a woman, aged 23 years, who developed pneumonia in the right apex, following a left suppurative tonsillitis. The author explains this as metastasis from a primary purulent focus.

Ed.

404

When Shall We Remove Tonsils and What Type of Operation Shall We Do? E. A. CROCKETT, *Boston Med. and Surg. Jour.*, March 23, 1911.

Crockett states: 1. That tonsils should be removed: when they are large and non-adherent and fill the cavity of the pharynx because of their obstruction to breathing and their influence upon nutrition, and so as to secure the proper formation of the jaw at the period of second dentition. 2. Tonsils should be enucleated in all cases associated with enlarged glands in the neck and in all cases of articular rheumatism in which the tonsil is a possible etiological factor. The operation should be performed in the quiescent stage. Endocarditis is not necessarily a contra-indication. 3. The tonsils should be removed entirely in all cases of repeated peri-tonsillar abscess.

The author pleads against the removal of tonsils when they are of only moderate size, under promise to the parents that their removal will relieve a cold in the head or aural trouble. Though tonsils in adults be large, yet if there be no history of throat infection since several years the tonsils should not be removed. When tonsils are removed, the operation should be performed by blunt dissection. After the procedure the patient should be kept quiet for three or four days.

Ed.

408

Voluminous Calculus of the Tonsil. P. DELOBEL, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 641, Nov. 25, 1911.

Patient aged 50 years had a large calculus 0.025 mm. long and 0.006 mm. in diameter (wg. 0.71) in his left tonsil. Removal. Chemical composition was found to be 20 per cent organic and 80 per cent mineral.

Ed.

409

Severer Types of Tonsillar Infection. D. S. DOUGHERTY.

Original contribution to THE LARYNGOSCOPE, p. 707, June, 1911.

414

The Tonsils as Entrance Portal of Infection. G. FINDER, *Med. Klinik*, Dec. 10, 1911.

Finder holds that the tonsil may be the entrance portal for infectious such as diphtheria, scarlet-fever, acute articular rheumatism, general

sepsis, cerebro-spinal meningitis, acute poliomyelitis, endocarditis, orchitis and tuberculosis. The general practitioner is little familiar with chronic tonsillitis and has thus far given but little thought to the possibility of infections entering through the tonsils. Ed.

416

The Fauical Tonsils, with Especial Reference to Their Removal by Enucleation. FRASER, *Edin. Med. Jour.*, p. 30, July, 1911.

Abstracted in THE LARYNGOSCOPE, p. 135, Feb., 1912.

418

Relation of Enlarged Tonsils to Endocarditis. A. C. GETCHELL, *Ann. of Otol. Rhinol. and Laryngol.*, p. 565, Sept., 1911.

The causal relation of hypertrophies and of infected tonsils to endocarditis is not regarded as such a definite one as is held by some. Among 2,000 tonsillectomy cases at the Memorial Hospital at Worcester, heart lesions were found to be extremely rare. Not all heart murmurs mean endocarditis. While experimental and clinical evidence show the mouth and throat to be portals of entry of infectious agents, which later may invade the heart, it does not follow that the tonsils are the sole portal of such entry nor, indeed, that they are an essential agent in the infection. "The indications for removal, so far as this question is concerned then, are, is the tonsil subject to recurring attacks of inflammation, or is it evidently diseased? If the tonsil is simply hypertrophied, such removal, either in whole or in part, as will prevent future attacks of inflammation is sufficient. If it is evidently diseased, and especially if buried and bound down by inflammatory tissue, it must be thoroughly dissected out."

EDGAR (GOLDSTEIN.)

419

Chronic Cholesteatomatous Inflammation of the Tonsil and Its Treatment. R. GOLDMANN, *Prag. med. Wchnschr.*, No. 50, 1911.

Goldmann reviews the clinical histories of cases of tonsillitis chronica with thrombus formation and the general infection resulting therefrom. As therapeutic measures Goldmann recommends slitting up the follicles, tonsillotomy and tonsillectomy. Ed.

420

Some Indications and Contra-indications for Removal of the Fauical Tonsils. J. B. GREENE.

Original contribution to THE LARYNGOSCOPE, p. 715, June, 1911.

424

Albuminuria in Chronic Tonsillitis. GRUET, *Rep. Med. Internat.*, Aug., 1911.

Albuminuria has sometimes been observed in chronic tonsillitis, in the lacunar form as well as in certain cases of chronic tonsillar abscess. The physician usually treats this functional disturbance without success, often diagnosing it as a catarrhal fever or gastric disorder. In

acute or chronic angina this complication usually develops due to the toxemia. Sometimes too the parts of the caseous contents of the crypts are swallowed and some of the insoluble elements are absorbed by the intestinal mucosa. Deglutition of pus can also set up fermentation in the stomach. As a result of this disturbance of the digestive functions, albuminuria may develop.

All treatment must be directed against the primary seat of the infection, and usually simply tonsil-dissection is insufficient; tonsillotomy has to be performed. This procedure effectively suppresses the infection.

Ed.

428

Unusual Case of Disturbance of Equilibrium Occurring as a Reflex Manifestation of Hypertrophic Tonsils and Adenoids. H. B. HAYES, *Charlotte Med. Jour.*, March 1, 1911.

Little Indian boy, aged 3½ years had attacks resembling "petit mal," which usually occurred in the early part of the day. While playing or sitting on a chair the child would suddenly fall, backward or forward—hardly ever in a lateral direction. This attack was usually followed by a slight inspiratory stridor. In the intervals between the attacks the little boy was perfectly well. After the removal of the hypertrophied tonsils and adenoids all these symptoms entirely disappeared.

Ed.

429

Two Cases of Severe Secondary Hemorrhage After Tonsillotomy in Adults. HELOT, *Rev. Med. Chir.*, No. 12, p. 434, 1911.
Published in *Rev. Med. de Norm.*, Dec., 1910.

431

Relation Between Diseased Tonsils, Rheumatic Fever and Heart Disease. A. K. HIGGS, *N. W. Med.*, Nov., 1911.

The relation between tonsillar inflammation and rheumatism has been acknowledged for several years, but it is only lately that its relation to heart lesions has been pointed out. Although, thus far, no specific etiologic factor has been isolated it is universally conceded that the tonsil is the portal of entry both for the articular and myocardial infection. Often the offending tonsils are small and submerged and thus overlooked as the cause of the systemic affection. Higgs discusses the various therapies, operative and otherwise.

432

Cases of Late Secondary Hemorrhage After Tonsillotomy. F. E. HOKINS, *Ann. of Otol. Rhinol. and Laryngol.*, p. 575, Sept., 1911.

Case I. Boy aged 7, on June 21, 1910, under ether anesthesia had submucous removal of septal exostosis and an adenectomy and tonsillectomy. Considerable hemorrhage came from left tonsillar space on ninth and tenth days after operation. Bleeding controlled with clamp on latter date when it was found the patient had a well marked eruption of measles.

Case 2. Man, aged 19, with poor health, endocarditis and water-hammer pulse. Tonsils were removed under cocaine anesthesia with Farlow punch. Severe secondary hemorrhages occurred on the fifth, tenth and twelfth days.

EDGAR (GOLDSTEIN.)

433

Chronic Urethritis and Chronic Ureteritis Caused by Tonsillitis. G. L. HUNNER, *Jour. A. M. A.*, April, 1, 1911.

Hunner reports several cases of rheumatic urethritis in which gonorrhea could be positively ruled out and in which tonsillectomy relieved the condition, and points out the possible connection. He quotes Dr. Geraghty as saying that several cases of acute prostatitis with abscess formation occurred during or after tonsillitis.

Ed.

434

Case of Tertiary Ulcer of Pharyngeal Tonsil. H. IWATA, *Passows Beitr.*, Bd. 5, Heft 1, p. 68, 1911.

In a boy, aged 14 years, the right half of the face, including the lower maxilla was less developed than the opposite side. The right auricle was malformed and the canal closed. Also absence of taste on the anterior portion of the right half of the tongue. Accidentally a tumor in the pharynx was discovered. It was situated in the superior portion of the right, slightly hypertrophied, tonsil, and was pedunculated, pale-red, and the size of a bean. Microscopic examination: Pavement epithelium, externally, with connective tissue, lymph-follicles and profuse glands and muscular vessel-contents.

Ed.

436

Osteo-fibroma Occupying the Tonsillar Fossa. (Probably of Styloid Process.) A. L. KELSEY, *South. Cal. Practitioner*, Feb., 1911.

The tumor was the size of a walnut and its rapid growth and history suggested sarcoma of the tonsil. Enucleation was accomplished with much difficulty by means of a Yankauer tonsil-dissector. The tumor extended outward and backward occupying fully the space between the spinal column and the jaw and rested on the sheath of the internal carotid artery which could be seen pulsating after its removal. A histologic examination showed the tumor to be an osteo-fibroma. Death resulted on the thirteenth day after the operation, evidently from pneumonia.

SCHEPPEGRELL.

443

The Result of Tonsillectomy. OLIVER A. LOTHROP, *Boston Med. and Surg. Jour.*, p. 173, Aug. 3, 1911.

Data are given from sixty-one cases of children examined one to three years after removal of the tonsils and adenoids at the Children's Hospital in Boston. The technic employed was dissection of the pillars and enucleation of the tonsil with the wire snare.

Ninety-one per cent of these cases reported showed improvement. Sixteen per cent acknowledged having had sore throats since the operation; in most of these a little residuary tonsillar tissue could be demonstrated

The possible dryness of the throat was carefully investigated. None of the throats appeared dry; six cases thought their throats were some times dry on waking in the morning. The possible drawing sensation from scar tissue formation is advanced as a feasible explanation for this feeling of dryness. Nose "colds" had occurred once or oftener in twenty one per cent.

As to post-operative hemorrhages in this clinic, only two cases had required suturing of the pillars in the last three years, and in a third the suturing was done as a precautionary measure. In each instance, the bleeding was successfully controlled. This in a series of 1,700 operations made the very low percentage of .00176 per cent. BERRY (MOSHER.)

446

Relation of the Tonsil Operation to the Soft Palate and Voice. G. HUDSON MAKUEN, *N. Y. Med. Jour.*, p. 265, Aug. 5, 1911.

The two principal reasons for doing a tonsil operation are the removal of foci of affection, and the removal of obstructions to phonation and articulation.

The normal healthy tonsil is probably beneficial to voice production in two ways, (1) it improves the resonance of the voice, and (2) it keeps the pillars of the palate apart and gives direction to their action in voice production. Hypertrophied and degenerated tonsils, on the other hand, are prejudicial to voice production, because they interfere with the normal resonance of the voice and with the action of the palatal and lingual muscles during phonation.

The soft palate has two important functions in phonation, one being a valvular function by which vocal resonance is markedly affected, and the other a thyroid tilting and cord stretching function by which the quality and pitch of the voice are determined and regulated. The valvular action of the soft palate may be greatly interfered with by abnormally large or degenerate faucial tonsils, the large tonsils interfering with the motility of the depressor muscles, and the degenerate having somewhat the same effect by the catarrhal hypertrophies and adhesions which they engender. When these conditions are particularly marked, the palatal valve fails to close, leaving the oro-pharynx in free communication with the nasal cavities, and giving to the voice its characteristic faulty resonance. In addition to this, of course, when the valve fails to close and the soft palate hangs limp in the oro-pharynx, the palato-pharyngeal muscles, having lost their anchorage in the vault, are quite unable to perform their thyroid tilting and cord stretching function, and the voice necessarily suffers as a consequence both in respect to quality and to pitch.

It is not a question, therefore, of injuring the voice by the tonsil operation in such cases, but it is a question of improving it and oftentimes of actually saving it. It must be remembered, however, that insult may be added to injury and great harm done to the voice by a careless and perhaps too radical operation.

The dangers of interference with the action of the palatal and lingual muscles by post-operative contractions and adhesions, following even

the most carefully and skillfully performed operations, must be regarded as the great objection to the total enucleation of the tonsil, or the so called radical operation. It is a very unusual thing to find the pillars of the palate entirely free two or three months after the total enucleation of the tonsil together with its capsule, and it is probably due to this fact that injuries to the voice have been so numerous.

The best results, so far as the preservation of the function of the faucial muscles is concerned, have followed intra-capsular operations, and but for the difficulties encountered in removing all the offending lymphoid tissue without at the same time removing the capsule, this would be the operation par excellence in the great majority of cases.

Conclusions: Normal tonsils are in no way prejudicial to phonation, but, on the contrary, they may be helpful both in directing the action of the neighboring muscles and in modifying the resonance of the oral cavity. Hypertrophied tonsils, on the other hand, are distinctly prejudicial to phonation, because they interfere with the action of the muscles, they deflect the vibrating column of breath, and impair the normal resonance of the oral cavity. Degenerate tonsils are prejudicial to phonation primarily because they are prejudicial to health, and secondarily, because they interfere with the action of important vocal organs by setting up a catarrhal condition in the oro-pharynx, which results in hypertrophy of the faucial pillars, the plica, and the capsule, and in numerous inflammatory adhesions binding all these parts together in one conglomerate mass.

The two important indications for the tonsil operations are, to remove foci of infection and to increase or restore the functional efficiency of the respiratory, phonatory, and articulatory organs; and the operation that fails to meet the requirements of these two indications is more or less of a failure. The tonsil that requires removal is always prejudicial to vocal excellence; but to do a little good in an operation, one should take heed lest he do a great harm. To do a satisfactory tonsil operation is often quite as difficult as to do any other operation in the region of the throat, nose, or ear, and it requires quite as much skill. The tonsil operation, therefore, is the one of all others that should be done with great care and deliberation.

The popular belief that the removal of tonsils is injurious to the voice is well founded, and it is due in large measure to careless or bad surgery.

A. A.

447

Two Cases of Sarcoma of the Tonsil. R. MARCELLI, *Arch. ital. di Laringol.*, p. 58, April, 1911.

Case 1. Woman, aged 42 years, felt the presence of a foreign body in her pharynx, hindering speech and deglutition, and causing rhinolalia clausa. The left tonsillar crypt was seen to be filled with a tumor springing from the lateral buccal cavity and occupying the pharynx almost over to the other tonsil. Enucleation of the tumor and removal with a galvanic snare, then application of the Roentgen rays. Microscopic examination: Hemo-angio-endothelioma.

Case 2. Woman, aged 65 years, presenting neoplasm of right tonsil adherent to the pillar and base of the tongue, and occupying a large portion of the buccal cavity; interesting cervical and sub-maxillary ganglions. The general condition of the patient did not permit of an extensive surgical intervention. The tumor was removed with the cold snare. Two months later the neoplasm did not recur on the buccal side, but continued to develop externally and in the cervical ganglions. It was a case of alveolar sarcoma. Ed.

448

Case of Tonsillar Calculus. J. M. MCCARTHY, *Brit. Med. Jour.*, Oct. 28, 1911.

In this case the stone was very large (2.5 cm. x 2.5 cm. x 1.5 cm.) and weighed 4.635 grams. Its chemical constituents were calcium phosphate, calcium carbonate and a slight amount of magnesium phosphate. Ed.

457

Accidents During Tonsillectomy and Sequelae of the Operation. A. O. PFINGST,

Original contribution to THE LARYNGOSCOPE, p. 798, July, 1911.

460

Fatal Case of Quinsey in an Adult. S. W. PROWSE.

Original contribution to THE LARYNGOSCOPE, p. 105, Feb., 1911.

461

Epidemic of Tonsillitis Due to Infected Milk. MARK W. RICHARDSON, *Boston Med. and Surg. Jour.*, p. 907, Dec. 14, 1911.

A report is given of the epidemic of tonsillitis occurring in Boston and vicinity during May, 1911. Careful tracing of the disease to its source discovered the fact that most of the infection was apparently from a single large milk farm. This was best demonstrated in the case of Brookline. Here, "whereas this farm supplied only 13.8 per cent of the total number of houses, 61 per cent of the total cases investigated occurred in houses supplied with its milk."

BERRY (MOSHER.)

462

The Tonsil and the Singer. M. D. RITCHIE, *Pa. Med. Jour.*, Feb., 1911.

Tonsillar disorders are more serious in singers than in other patients. The submerged tonsils, especially, cause much trouble. It is a mistaken view that removal of tonsils is destructive to the voice; on the contrary tonsillectomy often improves the vocal power. Ed.

463

The Faucial Tonsil—Its Relation to Systemic Disease and the Results of its Removal. S. ROSENHEIM, *Md. Med. Jour.*, Jan.-Feb., 1911.

Rosenheim arrives at the following conclusions: (1) Bacteria lodge frequently and deeply in diseased tonsils; (2) all hypertrophied tonsils should be removed; (3) in all infectious diseases the lymphoid tissue of the throat should be examined as a possible seat of the infection. In

several cases of articular rheumatism improvement followed removal of tonsils and leads the author to conclude that the tonsillar infection was the etiology of the systemic disorder. Ed.

470

The Tonsils as the Entrance Portal for Syphilis. H. J. SCHLASBERG, *Dermatol. Ztschr.*, July Supple., 1911.

Of fifty patients treated for some time for syphilis, six only showed the presence of the spirochaetes in the tonsillar serum. In all of these cases the tonsils showed no symptoms during three to four months, though previously there had been papillae on the tonsils.

Schlasberg feels that the tonsils may transmit the spirochaeta pallida without any clinical manifestations. Often in the early stages of syphilis no spirochaetes are present in the tonsils, but appear after the injections. If the tonsils are not treated papillae appear. Ed.

472

Pre-glottic Phlegmonous Tonsillitis. SEIFERT, *hebd. de Laryngol. d'Otol. et de Rhinol.*, p. 1, Jan. 7, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 57, Jan., 1912.

475

Histologic Examination of the Faucial Tonsils with Reference to Tuberculosis. E. C. SEWELL, *Jour. A. M. A.*, p. 868, Sept. 9, 1911.

Sewell reviews the literature and reports numerous cases to prove that tuberculous infection of the glands of the neck can take place through the tonsils. Removal of tonsils always worked beneficially. The reason we find tuberculous glands oftener than enlarged tonsils is that the infection can travel through the tonsils to the glands without injury to the tonsil. Ed.

476

Remarks on Certain Dangers Associated with Operation for the Removal of Tonsils and Adenoids. L. SEWELL, *Med. Chronicle*, p. 212, July, 1911.

Sewell discusses the complications in these operations: Hemorrhage, aural affections, torticollis, hypertrophied ganglions, cellulitis, retropharyngeal abscess, accidents with instruments, wounds of the faucial pillars, septic infection, purulent meningitis, endocarditis, convulsions. Chloroform anesthesia adds to the dangers of these interventions. Ed.

479

Further Studies on Primary Latent Tuberculosis of the Tonsils. W. SOBERNHEIM and R. BLITZ, *Arch. f. Laryngol. u. Rhinol.*, Vol. 25, No. 1, p. 121, 1911.

One hundred and twenty adenoid-children, ranging from 6 months to 13 years in age, were tested for T. B. with von Pirquet's method, resulting in 47 positive reactions. Following this, 10 of the removed adenoids were subjected to the usual histological examination with negative findings concerning tubercular tissue-changes in them or presence of

bacilli. Furthermore, 25 adenoids were treated with a 20 per cent anti-formin solution (a preparation favorable to the increase of bacilli), for 48 and 72 hours, followed by placing the mixtures in an incubator 24 hours, the microscopic examination resulting negatively. The authors contend, that although there is at the present time no unison concerning the question of tubercular tissue changes in adenoids, a connection with primary latent tuberculosis cannot be substantiated. This opinion is shared by their chief, Dr. B. Fraenkel, who, admitting of the occurrence of latent tuberculosis in the faucial tonsil, denies that the cause of hyperplasia of Luschka's tonsil is to be found in tubercular infection. In conclusion, they insist, that hyperplasias which do not interfere with breathing or cause other complications, are not to be operated upon, trusting that spontaneous involution of that organ, though the condition be pathological, will avert any danger to the health of the patient.

KLEENE (STEIN).

483

Primary Chancre of the Tonsil. A. B. THRASHER.

Original contribution to THE LARYNGOSCOPE, p. 1076, Nov., 1911.

491

Hemophilia Causing Death After Tonsillectomy. H. S. WILLARD, *Jour. Ophth. Otol. and Laryngol.*, p. 47, Feb., 1911.

The patient was a little girl, aged 6 years, with every evidence of good circulation and perfect health. During the first two hours following the removal of the right tonsil and adenoid tissue, no untoward symptoms were apparent; hemorrhage slight. Two hours after the operation vomiting and bleeding; pulse rapid and thready. Bleeding point could not be discerned. Every known means of checking the loss of blood was tried. At midnight (eight hours after first signs of hemorrhage) bleeding and vomiting ceased. At 11 a. m. the child suddenly gasped and died. A study of the history of the parents revealed the fact that the mother was a severe bleeder.

Ed.

492

An Outbreak of Tonsillitis or Septic Sore Throat in Eastern Massachusetts and Its Relation to an Infected Milk Supply. C. E. WINSLOW, *Boston Med. and Surg. Jour.*, Dec. 14, 1911.

Immediately following the epidemic of sore throat in Boston and vicinity during May of this year, Prof. Winslow came to Boston to make an exhaustive study of the disease, its origin, nature, and course. Through the different health departments of Eastern Massachusetts, and by the help of the local physicians where the disease was most prevalent, he was able to study 1,000 cases. He finds the evidence to be conclusive that the trouble began with an infected milk supply (over a period of two or three days) from the Deer-foot Farm, a dairy which supplies Boston and vicinity with about one per cent of its milk. Careful inquiry reveals the fact that an epidemic of sore throats occurred in the immediate vicinity of this farm just prior to the epidemic in Boston, and that though none of the farm hands handling the milk were sick, yet in a few

cases members of their families were infected. The proof becomes more conclusive when he finds that at no time has another epidemic exactly resembling this one been reported in this country, while there have been several in Great Britain which exactly conform to this one under discussion, and which were traceable to an infected milk supply. Eighty-five to ninety per cent of all the cases in Boston proper can be traced to this milk supply. The infecting period was from May 8 to May 11. The incubation period was two to three days.

The disease differed from an ordinary attack of tonsillitis. Three types were seen: the customary patches of tonsillitis, a membranous form resembling diphtheria, and an acute redness of the pharynx without local patches or membrane. "The most striking feature was the secondary enlargement of the glands of the neck, which in many cases followed the first sharp throat attack and which in some instances was followed by a general invasion of the deeper tissues, leading to sepsis, rheumatism, erysipelas, nephritis, and other maladies."

The writer made a careful inspection of the milk-farm and found conditions as sanitary and hygienic as they could be. Every precaution has always been taken against contamination of the milk. He, therefore, concludes that the only safeguard against such contamination as must have happened in this instance, is the proper and thorough pasteurization of the milk.

BERRY (MOSHER).

494

Contribution to the Study of Fats and Lipoids in Animal Tissues. Soaps and Cholestin in the Tonsil. J. WRIGHT, *N. Y. Med. Jour.*, Feb. 25, 1911.

The only means by which fat surrounding the cell can penetrate into the cell is by means of phagocytosis. Wright has followed the process of this transportation especially by means of the erythrocytes into the lymphoid tissues of the tonsils.

Ed.

497

Edema of the Uvula: Its Significance and Treatment. THOS L. SHEARER, *Jour. of Ophth. and Oto Laryngolo.*, June, 1911.

This condition is found as an accompaniment of inflammatory states of neighboring tissues, as, peri-tonsillar inflammation, etc. It is seen in arthritic cases, tertiary syphilis, phthisis and general hydremia; also in kidney disease (and some heart cases. Abstractor's note). An alarming type is seen in angio-neurotic disease, the edema of which, according to Heidenhain, is due to certain organic substances, such as an infusion of crab meat, acting as a lymphagogue.

STEIN.

498

Hard Tumor of the Thyroid at the Base of the Tongue. P. BERTEIN and E. GELLE, *Gaz. des Hop.*, Feb. 21, 1911.

According to the authors, these growths originate in His' duct. They may be regarded as aberrant goiters. Two cases are recorded in detail. Lingual goiters appear at all ages, but especially in females and at puberty. Two cases have been recorded in new-born infants. Usually the

development is symptomless, sometimes the growth may exist unnoticed for many years. The authors do not favor preliminary intubation in all cases; one of its advantages is that thus the presence or absence of the thyroid may be determined. When there is doubt of its presence the writers advise abstaining from operative intervention unless the growth increases so that it becomes troublesome. Under such circumstances the neoplasm must be removed. The authors detail the technic for the various operative procedures.

Ed.

499

Amyloid Tumors of the Tongue and Lips. A. BERTELS, *St. Petersburg. Med. Wchnschr.*, p. 445, Oct. 25, 1911.

In a post-mortem performed on a woman with amyloid disease of the spleen and kidney, ulcerations were present on the tongue and lips, and the iodine and sulphuric acid test showed black spots on the tongue; also a suppurative cystitis. No clinical, post-mortem, microscopic nor microscopic data as to origin of intestinal or buccal ulcers nor their connection with the cystitis. The ascitic fluid was extremely opalescent, a peculiarity frequent in amyloid disease.

Ed.

500

Epithelioma of the Tongue; A Review of Sixty Hospital Cases. F. M. CAIRD, *Edin. Med. Jour.*, Jan., 1911.

Thirty-eight of the sixty patients gave definite accounts of antecedent local irritations,—caries or jagged teeth, badly fitting artificial dentures, prolonged use of pipe, caustics. One patient said she scalded her mouth with porridge eight weeks before the epithelioma developed. Not one of the male cases recorded was a non-smoker and only three were total abstainers. Four males acknowledged syphilitic infection, but in none were there any manifestations apparent; leucoplakia was noted in three cases—on the tongue and cheeks. Of the 60 cases, 47 were operated; 7 died as a result of the operation. At present 16 are alive. The longest period of survival is seven or eight years.

Epithelioma of the tongue rarely occurs in women. Its course is usually as follows: A local induration or hard, elevated area appears on the lateral border of the tongue where perhaps a crack or fissure already existed; the epithelium gives away, an ulcer forms and the patient complains of a pain referred to the ear and temporal region; the cervical lymph glands become enlarged. Finally the growth spreads causing the patient pain when he swallows, eats or speaks, and he finds great difficulty in protruding his tongue.

Ed.

501

Best Prophylaxis Against Aspirating Pneumonia After Extensive Operations on the Tongue or in the Mouth or Pharynx. A. CECIL, *Bull. d'Oto-Rhino-Laryngol.*, p. 102, April, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1185, Dec., 1911.

503

Case of Congenital Thyro-laryngo-lingual Fistula. C. COMPAIRE, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 118, Jan., 1911.

Report of a typical case of complete congenital lingual laryngeal fistula. Compaire has been unable to find a report of a similar case in literature.
Ed.

505

Cyst at the Base of the Tongue. E. A. FORSYTH.

Original contribution to *THE LARYNGOSCOPE*, p. 145, Dec., 1911.

506

Peculiar Recurrent Mykosis of the Tongue. M. GAUTZ, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 3, 1911.

Interesting on account of anatomo-pathological findings: Thirty-year-old female complaining for six weeks of tongue. Lesion appeared as a pimple increasing in size. Of late patient feels sick, no appetite, sleepless, sialorrhea, sense of foreign body in mouth, difficult speech, loss of weight from difficulty in eating. Patient looks very sick, much like a quinsy case. Pain on swallowing referred to right ear and neck. Sublingual glands enlarged, especially left; hard, but not painful. Uvula blind, point of left touches tongue and is covered by whitish membrane. Right half of tongue has a thick whitish covering, part of which can be lifted up; by tearing off it is painful, leaving a hyperemia and bleeding surface beneath. At root of tongue left side is also covered by this membrane. No fever. Pharynx, larynx, ears, nose, normal.

Some years ago patient had a similar condition of tongue, which was less painful and severe and finally disappeared. Treatment consisted in removing with scissors all membrane, painting exposed surface with iodine and prescribing a peroxide mouth-wash. Immediate improvement. After two weeks only a few spots left. After another two weeks there was a slight recurrence. The anterior right half had a slight, easily removed membrane and the root of tongue had a thick membrane, all speedily disappearing under treatment. A smear and a stained preparation both showed only the leptothrix. An alcohol-paraffin preparation showed the ray-like arrangement seen in actinomycosis. The diagnosis made was glosso-mycosis benigna. One and a half years later patient returned with similar condition, only the lesion was deeper and there was more loss of tongue-substance. At intervals there have appeared spots and slight signs of the trouble but it always improved under the peroxide wash. This last attack was treated as at first and was healed after two weeks. Wassermann was negative. Animal inoculation not made.

STEIN.

509

Deviation of Tongue in Hemiplegia. E. JONES, *Jour. Nerv. and Ment. Dis.*, p. 577, Oct., 1911.

Three hundred and thirteen cases of hemiplegia were investigated. In 104 cases the tongue was protruded toward the paralyzed side (typical), in forty cases towards the opposite side (atypical), i. e., the contralateral

geniohyoglossus was paralyzed nearly three times as often as the homolateral. In sixty-seven cases the tongue could be put into the cheek on the side of the lesion more easily than into that on the side of the paralysis (typical); in twenty-one cases the reverse was the case (atypical), i. e., the contralateral styloglossus was paralyzed more than three times as often as the homolateral. The two atypical symptoms did not tend to occur in the same cases, so that four sets of cases are to be distinguished. There is every reason to believe that the geniohyoglossus, the muscle of most significance in this connection, is represented in both hemispheres. The experimental evidence would seem to show that it is chiefly represented in the homolateral hemisphere, and the clinical evidence that it is chiefly represented in the contralateral. Beevor's explanation of lateral deviation is incomplete, and does not account for all the facts just stated. A final explanation is impossible until the course of the corticohypoglossal tracts is more fully elucidated. The four symptoms just mentioned can probably be accounted for by a varying implication of the four different corticohypoglossal tracts that proceed from each hemisphere; this may depend either on a variation in the crossing in different cases or on a variation in the position of the lesion.—*Ex.*

515

Lingual, Sublingual and Other Forms of Aberrant Thyroids. C. H. MAYO, *Jour. A. M. A.*, p. 784, Sept. 2, 1911.

Mayo himself has seen three lingual thyroids, one of which showed both lingual and sublingual features. The slowness of the growth in so rich a blood-supplied area usually excludes malignancy. These cases are differentiated from angiomas in that the latter are more spongy, irregular in outline, of purple color and usually show greenish extensions to the lateral pharyngeal areas. The only treatment is an operative one, and the prognosis is usually good. One out of seven patients operated for lingual thyroids developed myxedema, though the author states that this information is not accurate, as yet. Ed.

520

Multiple Luetic Primary Sclerosis of the Tongue. E. POLLAK, *Mitt. des Vereins. d. Aerzte in Steiermark*, No. 7, 1911.

The patient experienced five weeks before this report inflammation and swelling of the gums. When he came for treatment he complained of intense burning sensation on the tongue and in the throat. Examination showed an ulcerated, infiltrated ganglion on the right upper surface of the lingua plicata. The submaxillary and submental lymph glands were greatly enlarged, hard but not sensitive. The numerous submental groups of glands (reaching from the chin to the hyoid bone) were immobile and seemed attached to the inferior maxilla. After ten days there were three profusely infiltrated ganglions on the left side of the tongue. The ganglions were of a dark red color; their centers had a violet hue. The glands were less inflamed; on the other hand, however, there were macular, non-itching, exanthemata on the body. Under antiluetic treatment all these symptoms disappeared and the glandular tumors and sclerosis decreased to half the original size. Ed.

523

Lympho-sarcoma of the Tongue. J. SCHLEINZER, *Deut. Ztschr. f. Chir.*, April, 1911.

Case of woman, aged 54, who suddenly experienced pain in the neck and dysphagia. Within a week, fetid breath, profuse expectoration and burning sensation in the throat. Examination revealed lump in neck below the angle of the jaw and an ulcer on the right margin of the tongue; diagnosis—cancer. Lingual artery ligated, right cervical glands removed, lower jaw resected, and growth which extended to epiglottis and arch of palate removed. A few weeks later an enlarged gland removed from other side also. No recurrence to date,—five years since operation. Schleinzner reviews the literature and finds another similar case in which, however, the operation was not successful. Ed.

524

Recurrent Herpes of the Tongue. R. SCHWAB, *These de Paris*, 1911.

Recurrent herpes of the tongue is very often found in arthritic patients and the arthritis may often be considered the predisposing cause of the recurrent herpes. Occasionally syphilis itself or syphilitic treatment causes herpes; nineteen or twenty per cent of the cases of lingual herpes are in syphilitics. One must be very careful, however, not to confound the herpetic lesions with mucous plaques. Ed.

532

Actinomycosis of the Tongue. A. N. ZIMINE, *Chir. Arc. Veliaminova*, No. 3, p. 618, 1911.

An engineer, aged 54 years, burned his tongue with some tea; he noticed a small tumor the size of a pea on the left half of his tongue near the tip; no inconvenience nor pain. The tumor doubled its size within a week. It was hard, indolent, slightly mobile; its mucous surface was normal; no adenopathy. A small portion of the tumor was white. Diagnosis: Malignant tumor. Removal under local anesthesia. Examination of a specimen revealed that it was a typical actinomycosis. Within the tumor was found a foreign body of vegetable origin. It was later ascertained that the patient was in the habit of chewing grains of wheat. Ed.

541

Vincent's Angina. K. BLUEHDORN, *Deut. med. Wchnschr.*, June 22, 1911.

Bluehdorn reports that he found the fusiform bacilli or spirilla or both in 51 of the 76 patients with diphtheria; in 11 of 42 with scarlet fever; in 13 of 26 cases of streptococcal or staphylococcal sore throat, in 2 of 4 cases of ulcerative stomatitis; in 25 of 35 cases of syphilitic mouth or throat lesions; and in 22 of 40 healthy individuals. In this last instance they were found close to the teeth and were responsible most likely for certain ulcerative processes. Ed.

552

Case of Gangrenous Stomatitis Probably Caused by the Bacillus Necrophorus. FARQUHARD CAMPBELL and FREDERICK W. SHAW, *Jour. Kansas Med. Soc.*, Feb., 1911.

The patient, 13 years of age, suffered from what appeared to be an ordinary case of gangrenous stomatitis which resulted fatally. A histologic examination of the necrotic tissue showed an organism which resembled the bacillus necrophorus. The peculiar odor of this bacillus was present. No attempt was made to isolate the organism in pure culture and no inoculations were made.

SCHEPPEGREGILL.

555

Case of Actinomycosis of the Neck and Face. CASTROVERDE, *An. de Med. y Cir. de Malaga*, April, 1911.

Castroverde cured this case of actinomycosis by administering iodid of potassium, opening the abscess and applying iodine into the fistulae.

Ed.

558

Macroglossia; Report of a Case. J. H. COMBIE, *Cleveland Med. Jour.*, p. 243, Sept., 1911.

Shortly after birth it was noticed that the tongue of this little girl was very large, though apparently normal in every other respect. When the teeth began to erupt the tongue became much thicker and was covered on its anterior portion by smaller papillae which gradually grew larger and took on a bluish color. In the course of a year the whole tongue became sore and a severe hemorrhage developed which was controlled with difficulty; this was followed by repeated, slight hemorrhage. No difficulty either in mastication nor speech. The posterior half of the tongue was entirely normal. At the age of 3 years the child was operated with the result that the tongue is almost entirely normal.

Ed.

572

Rare Case of Lingual and Pharyngeal Sporotrichosis with Threatened Asphyxiation. J. DUVERGER and A. BAIN, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 401, April 15, 1911.

Abstracted in THE LARYNGOSCOPE, p. 714, June, 1911.

578

Detection of Foreign Body in the Throat by Staining It. J. FACKENHEIM, *Therapeut. Monatsh.*, June, 1911.

In this case the foreign body was a fish-bone which lodged in the throat but could not be detected. The author conceived a plan of staining it to make it visible. He ordered the patient to eat some stewed huckleberries. After this procedure a blue point became visible projecting one millimeter from the left tonsil. Since this case Fackenheim has used this method several times with equal success.

Ed.

580

Vibratory Massage Treatment of Chronic Pharyngitis. G. FANOE, *Ugskr.cript for Leger*, p. 443, March 30, 1911.

The author reports good results from the use of the Storch electric vibrator. HALD.

587

Tuberculosis of the Parotid Gland. L. FIORAVANTI, *Rif. Med.*, Oct. 16, 1911.

Fioravanti reviews the literature on tuberculosis of the parotid gland, thirteen cases in all, and reports one of his own. The ages of the patients range from 3 to 60 years, though the condition is most frequent in adults—his patient was a woman of 34 years. The lesion may be single or with multiple foci, closed or ulcerated, and occurs in individuals otherwise healthy. Surgical treatment is the only one indicated and complete recovery results. Ed.

591

Radiography of the Lingual Artery. FRECHE, *Gaz. hebdom. des Sci. med.*, Jan. 8, 1911.

Freche reports on a series of radiograms of the lingual artery. For the procedure the artery was injected by a special method so as to permit a study of its ramifications and anastomoses. Ed.

593

The Oro-pharynx as a Portal of Entry for Infection. L. F. FRISSELL. Original contribution to THE LARYNGOSCOPE, p. 1002, Oct., 1911.

600

What is Known and Unknown About Vincent's Angina. GERBER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 321, 1911.

Abstracted in THE LARYNGOSCOPE, p. 1094, Nov., 1911.

601

Microscopic Researches on the Development of the Buccal Liptothrix in Mycosis. R. GEZES and U. L. TORRINI, *Rev. hebdom. de Laryngol. d'Otol. et de Rhinol.*, p. 305, Sept. 9, 1911.

Owing to the fact that the authors found the liptothrix buccalis under and in the involved adenoid tissue, in all cases of pharyngomycosis, the conclusion is drawn that it is also the etiological factor in the disease. This hypothesis has been advanced by others also. However, the author further states that the infection is transmitted from hens to the human. The therapy is also discussed at length. It consists chiefly in removal of the affected areas. Ed.

603

Case of Congenital Cavernous Angioma of the Neck. A. J. GILMOUR, *Med. Rec.*, Oct. 7, 1911.

This malformation was observed by the mid-wife, in a well-nourished child, one day after birth. The tumor was situated just within the middle of the base line of a triangular area, of a light red birth-mark at the

middle of the back of the neck at its junction with the shoulder. The base, $3\frac{1}{2}$ inches long, extended across the back of the neck, just below the growth. The tumor itself was an inch in diameter, and pedunculated. It was pinkish-red, with after-traces of purple. Pressure caused the contents to disappear, leaving a thick, boggy sack. The mass had increased somewhat in size since birth, and had become of a darker purple color.

At $2\frac{1}{2}$ months, the growth was removed with good results. A photograph accompanies the report.

LEDERMAN.

606

Experimental Demonstration of the Presence of the Virus of Measles in the Mixed Buccal and Nasal Secretions. J. GOLDBERGER AND J. F. ANDERSON, *Jour. A. M. A.*, p. 476, Aug. 5, 1911.

The authors have shown in a previous communication that monkeys are susceptible to infection of measles when inoculated with the blood obtained from a human case late in the pre-eruptive stage or within twenty-four hours after the appearance of the eruption. Following such an inoculation at least 50 per cent of the animals react in a characteristic manner. Most marked are the symptoms referable to the respiratory tract.

By a series of similar experiments the authors have been able to conclude that the nasal and buccal secretions possess marked infectivity.

GOLDSTEIN.

607

Fatal Variety of Ulcerative Sore Throat. GOODALL, *Med. Rev.*, Jan., 1911

The author observed thirty-five cases in the course of three years. The early stages are insidious as in diphtheria. The first symptoms are vomiting, fever, anorexia, swelling of the neck due to adenitis and angina. Sometimes pneumonia confuses the diagnosis. Then one notices a false membrane on one or both tonsils, at times also on the uvula and velum palati; aqueous or muco-purulent rhinorrhea. The first diagnosis is usually diphtheria, but at the end of three or four days one perceives that this diagnosis is incorrect. The false membranes are not situated on a normal or nearly normal mucosa, but on a more or less profoundly ulcerated surface. In fatal cases the ulcerations attack the larynx. Lobular pneumonia, inflammation and swelling of the ganglions, of the cellular tissue and of the skin of the neck may be complications. In case of recovery convalescence is long. Other complications are a measles-like rash, a scarlatina-like erythema, thrombosis of the tonsil-veins and of the upper longitudinal sinus. In six cases an otitis media was followed by a meningitis. Of the thirty-five cases reported twenty-five have ended fatally.

Ed.

608

Case of Pharyngeal Actinomycosis. GORIS, *Ann. de la Soc. Belge de Chir.*, Jan.-Feb., 1911.

Goris exhibited an actinomycotic specimen, obtained, by operation, from a man who had the habit of biting open, grains of corn which he gathered while promenading.

Ed.

612

On Recurrent Enlargement of the Salivary Glands. D. M. GREIG, *Edin. Med. Jour.*, Jan., 1911.

Abstracted in THE LARYNGOSCOPE, p. 1175, Jan., 1911.

615

Method of Keeping Open a Retro-pharyngeal Abscess in Children. GUARNACCI, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 480, Sept., 1911.

The author accomplishes this by removing a piece of the abscess-wall by means of a small Hartmann conchotome. This prevents re-accumulation of pus and healing is hastened. Removal of a portion of the anterior wall has no injurious effect.

Ed.

617

Unusual Cases of Foreign Body in the Pharynx. GUTHRIE, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 385, 1911.

In the first case a coin was aspirated into the hypopharynx, the posterior pharyngeal wall was injured in trying to remove it. Removal finally accomplished under chloroform anesthesia by means of a forceps, after introduction of a Killian cannula. In the second case, in a girl of 11 years, a pin was removed from the larynx, by the direct method, under general anesthesia.

Ed.

618

Mumps in Connection with Disease of the Auditory Nerve and Labyrinth. H. HAIKE, *Ztschr. f. Kinderh.*, Bd. 2, No. 6, 1911.

Haike reports the case of a young man of 19 who became suddenly deaf after a few days of malaise and slight fever but no local pain or vertigo. The other features of the case suggested mischief in the labyrinth, and three days later bilateral orchitis developed with high fever and much depression, the young man losing twenty pounds in the course of a month. The mumps seemed to have affected the internal ear first, and permanent deafness has resulted. There was no involvement of the parotid at any time. Gradenigo has reported a somewhat similar case in a boy under 5 years old whose smaller brother had mumps. The older had pains and swelling in the testicles but these subsided under cold application. The next day sudden deafness developed and was permanent. There were no symptoms on the part of the parotid at any time. In Haike's case there was no known chance for contagion with mumps in the town, but he thinks it should be classed as "epidemic parotitis without parotitis," and believes that this assumption will explain other cases of sudden, bilateral deafness in children, usually accompanied by some mental disturbance at first such as may accompany mumps.—*Ex.*

622

Pneumococcus Infections of the Throat. H. HAYS, *Ann. of Otol. Rhinol. and Laryngol.*, p. 835, Dec., 1911.

Dr. Hays reports five of these cases. As observed in his own cases and in those of Semon and Elliott, previously reported, this condition is char-

acterized by a sudden onset, intense congestion and edema of the throat, an inflammation of the anterior chain of cervical glands, and considerable prostration. A superficial, circumscribed ulceration occurred sometimes. The course is usually short. In one case a mastoid involvement and in another case (Semon) a fatal tuberculosis supervened.

EDGAR (GOLDSTEIN.)

625

Anatomy and Physiology of the Salivary Glands. R. HELD, *Ann. of Otol. Rhinol. and Laryngol.*, p. 655, Sept., 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1192, Dec., 1911.

630

Case of Recurrent Carcinoma of the Parotid Gland Treated with Coley's Fluid. E. R. HUNT, *Lancet*, June 17, 1911.

Case of man, aged 54 years, who had large growth on right side of neck, apparently of parotid origin. The growth had appeared twenty-five years ago and had been removed in that time, but recurred after ten years, gradually becoming larger and more painful. Since entire removal was not deemed advisable, injections of Coley's fluid were begun, but were unsuccessful in that the patient expired after nineteen injections. However, Hunt points out the sedative action of the fluid (the patient's end being free from pain) and holds that in certain forms of carcinoma it may be found useful.

Ed.

632

Secondary Parotitis. F. C. HYDE, *Yale Med. Jour.*, p. 222, Dec., 1911.

In an exhaustive study of the literature from Stephen Paget's articles in the *Lancet* in 1886 and 1887 when interest was first really awakened in this disease down to the present time, the author discusses "Secondary parotitis, and gives a more detailed account of five cases coming under his own care. He finds as predisposing causes: Local trauma, infectious processes in the mouth, acute infectious and wasting diseases, mal-nutrition, and operations on the genito-urinary tract and the abdominal organs. These cause a susceptibility to local infection, or so influence the sympathetic nerves and the blood and lymph supply with which the parotid is so rich, as to create a lowered vitality here, and a favorable field for lodgment. Dryness of the mouth is frequently noted as a forerunner. Or, as he says again: "The salient points in the production of the complication seem to be: first, the ever present potential infection from the mouth; and second, those phenomena which induce decreased or abolished flow of saliva through the efferent duct."

Prophylactic measures consist in cleanliness of the mouth, and the encouragement of a free flow of saliva. Modern nursing and its care of the mouth during typhoid has made parotitis an almost unknown complication in this disease. The use of atropin, a too free manipulation of the organs in an abdominal operation, all play their more or less significant part.

"He concludes: (1) Secondary parotitis is usually an infection of the parotid gland via Stenson's duct. (2) Sympathetic or reflex influence

from the generative organs and others, is a factor in its production only as it produces in common with other similar processes, vaso-constriction of the parotid vessels and inhibition of secretion. (3) Dehydration is a predisposing factor.

A very comprehensive bibliography follows.

BERRY (MOSHEE.)

636

Lymphoid Masses in the Pharynx as a Survival Factor in Evolution of Man. H. W. JOHNSON, *Jour. Ophth. Otol and Laryngol.*, p. 427, Nov., 1911.

Johnson put forth the view that changes in the lymphoid tissues in the pharynx are a factor in the process of adaptation to environment. If the apparently pathological conditions cause disturbances, the offending tissue should be removed. But the author urges conservatism; the true function of these organs is not known. If they are a part of nature's adaptive and protective work, we retard this work by hasty removal.

ED.

638

Mixed Tumors of the Parotid. E. S. JUDD, *Jour. Minn. State Med. Ass'n.*, June, 1911.

In twenty-two of the forty-one cases reported by Judd the tumors were in the right parotid. Twenty-five of the patients were females. The majority of these tumors occurred in the second decade. The youngest patient in the series was 15 years of age and the oldest 71 years of age. The average length of time in which the patient had the trouble before operation was eight years. One case appeared to be of one month's duration. In nine of these cases the endothelial element predominated, five were sarcomatous, three were mixed-cell tumors undergoing sarcomatous change, and three were mixed tumors undergoing endotheliomatous change. Ten of these patients came with recurring growths, or they had recurrences following operations. Twenty-seven of the forty-one patients have recently been heard from: twenty-four of them state that they are perfectly well, and three of them say they have a local recurrence. Two of the three had predominating sarcomatous elements at the time of operation; one, a man of 70 years of age, had had a tumor for thirty years with a history of rapid growth during the last three months. This patient died, evidently of metastasis.

Judd claims that the endeavor to preserve all of the fibers of the seventh nerve may be said to be the cause of most of the recurrences following the removal of mixed tumors of the parotid. If we could deliberately excise the tumor with as much of the parotid as we deemed wise, there would be no recurrences in the early cases, but as long as these tumors are not severely malignant in the beginning it is a question whether we are justified in sacrificing the facial nerve. In the encapsulated cases it has been Judd's custom to excise completely the tumor with the capsule, and to pack the entire wound with gauze saturated with Harrington's solution, in order that the raw surfaces may be seared to prevent the grafting of any cells. It was not found necessary to remove any of the lymphatics if the growth was well encapsulated,

and it was not observed that these tumors involve the lymphatics until very late in their development. On the other hand, if the disease is extending into the parotid and into the surrounding lymphatics, the parotid should be excised entirely, and with it the adjoining lymphatics. In a few of Judd's cases the tumor was very large, pressing into the mouth and throat, and causing considerable dysphagia and interference in swallowing. In these cases, in addition to the removal of the parotid, it was necessary to sacrifice the external artery and the internal jugular vein. —*Ex.*

644

Pharyngo-spasm an Initial Symptom of Pneumonia. W. LAFFORGUE, *Lancette, franc.*, p. 1508, Sept. 14, 1911.

Lassitude, pains in lumbar region, headache, vomiting. Patient admitted to hospital. Temperature rose to 38.4° C; pulse 96; drinking caused intense pain around hyoid bone; dyspnea and retrosternal pain. Examination: Slight pharyngeal hyperemia and slight tonsillar hypertrophy, otherwise pharynx and chest negative. Chill; temperature rose to 41.2° C; pharyngeal spasm and retrosternal pain diminished. Pulmonary symptoms appeared; liver not enlarged; no albumin nor sugar in urine; no nervous symptoms. In two days spasms disappeared; in five days convalescence from the central pneumonia.

The author feels that either the pulmonary trouble caused irritation of the recurrent laryngeal nerve or its branches, or that a reaction of the pleura in the area of hepatization was responsible for the dysphagia.

Ed.

647

Reaction of Proteolytic Ferment in the Diagnosis of Angina. F. LASAGNA, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 1, Jan., 1911.

Abstracted in THE LARYNGOSCOPE, p. 1130, Nov., 1911.

651

Septic Infections of the Mouth and Throat. M. D. LEDERMAN.

Original contribution to THE LARYNGOSCOPE, p. 721, June, 1911.

654

Von Mikulicz' Disease. Report of a Case. W. LINTZ, *N. Y. State Jour. of Med.*, Feb., 1911.

In 1894 von Mikulicz first described this affection as a distinct and typical, well-defined disease. The patient shows a symmetrical enlargement of the lacrimal and salivary glands, chronic in character, non-painful and not associated with any demonstrable systemic disease. The case upon which this paper is written was that of a young white girl, 14 years of age. A detailed history is given together with blood-examinations, pathological findings, and excellent illustrations. Both parotid tumors were surgically removed, and the girl made an uneventful recovery. With the exception of the above case, all others reported in this country were observed in the negro race. It has been found that a tuberculous history is given by a great number of these patients.

LEDERMAN.

657

Deafness from Mumps. O. MAUTHNER, *Wt. med. Wchnschr.*, Vol. 61, p. 2090, 1911.

This condition arises suddenly and is usually very severe. The first symptoms are a roaring or rushing sound in the ear, which is rapidly followed by total deafness. No middle-ear affection nor pain; usually dizziness, nausea and headache, pointing to involvement of labyrinth. In 1898 Gallavardin reported on fifty-one cases. Mauthner himself cites one case, that of a woman with bilateral epidemic parotitis. First day, ringing in left ear, increasing to a roar; four days later complete, permanent deafness. Then dizziness and nausea. Pilocarpin and the faradic current were used without avail. The author feels that the explanation of the trouble is a neuritis of the auditory nerve. Ed.

660

Hereditary Syphilitic Sclerosis and Leucoplakia of the Tongue in Two Brothers. P. MERKLEN, *Bull. de la Soc. de Ped.*, Jan., 1911.

Merklen reviews the different forms of lingual affection due to hereditary syphilis. Mucous lesions are rare though significant. Non-papillous glossitis, a superficial sclerotic glossitis, sclero-gommos areas, (the latter analogous to those manifest in acquired syphilis), macroglossia and also leucoplasia. Of the last mentioned the author reports two cases which he personally observed in two brothers. The progress of the disease was slow with recurrence and banal infection. A total cure was effected in both instances. Ed.

664

Late Mucous Patches of the Mouth. ROGER MIREUR, *These de Paris*, 1911.

The local treatment includes the removal of all sources of irritation to the buccal mucosa, the cauterization of the lesions and the hygienic care of the mouth. The general treatment in the majority of cases should be intense and prolonged. The best methods are intra-muscular injections of the salts of mercury (benzoate) or the intravenous injection of the cyanid of mercury. The iodid of potassium is a good aid to the mercurial treatment. Arseno-benzol or salvarsan seems to find here one of its principal applications. It acts as a cicatrisant and has given good results in cases which were not benefited by other methods. Its chief indication is in erosive or ulcerative patches where the mercury is ineffective or not well tolerated. SCHEPPEGRELL.

671

Vincent's Angina. MC. F. MURRAY, *Can. Prac. and Rev.*, June, 1911.

A concise account of the symptoms, clinical appearance, diagnosis and treatment of Vincent's angina, with a report of three cases. WISHART.

672

Symptoms and Diagnosis of Diseases of the Salivary Ducts and Glands.

R. C. MYLES, *Ann. of Otol. Rhinol. and Laryngol.*, p. 664, Sept., 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1194, Dec., 1911.

674

Sub-mucous Lipoma of the Left Cheek. NEGRONI, *L'Osped. Mag.*, March-April, 1911.

The tumor was removed through the mouth. The author is of the opinion that the lipoma originated in Bichat's canal and became submucous by spreading or in making a way through the thick fascia or buccinator.

Ed.

676

Hirsute Pharyngeal Polypi. E. OPIKOFER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, p. 347, Bd. 4, Heft 3, 1911

The hirsute pharyngeal polypus originated at the roof of the pharynx, in a little girl of 2 years, and was accidentally discovered, attached by a peduncle behind the velum. It was removed with the cold snare. The polypus was 3.5 cm. x 1.5 cm. with a smooth, white surface. Microscopic examination: Epithelial covering, lanugo-hairs, sebaceous and sweat glands, inner adipose tissue. No evidence of cartilage nor transversely striped musculature. The literature consisting of forty cases is also reviewed.

Ed.

677

Report of Nineteen Cases of Cysts of the Dental Roots and One Follicular Cyst With Special Reference to the Microscopic Findings. E. OPIKOFER, *Arch. f. Laryngol. u. Rhinol.*, p. 45, Bd. 25, Heft 1, 1911.

The follicular cyst was diagnosed by means of the Roentgen-rays and contained two teeth. Microscopical examination of the cystic roots showed three layers, a fibrous, granular and epithelial one. Often over a wide area there was no sign of an epithelial layer. The author discusses in detail the histological findings. The cystic follicle was enucleated; and the Jacques, Bertemes or Partsch method used to effect an opening toward the nose.

Ed.

684

Case of Esther. S. A. PFANNENSTILL, *Hygiea*, June, 1911.

Pfannenstill reports on his first case of tuberculosis of the pharynx and larynx treated by his new method. ($\text{NaI} + \text{O}_3$). The treatment was started in November, 1908, and covered a period of a year. Since the Wassermann reaction proved positive, potassium iodid was administered alone, with the result that the ulceration spread very rapidly. Hg was given only in intra-muscular injections twice weekly, but the ulceration spread. In January, 1910, the $\text{NaI} + \text{O}_3$ treatment was again undertaken. In three weeks the lesions were entirely healed, and the condition remained definitely positive until within a month of the patient's death (May, 1911).

Ed.

686

Schmidt's Syndrome Following Trauma—Hemiplegia Pharyngo-Laryngea with Paralysis of the Trapezius and Sterno-cleido-mastoid muscle. G. PIOLTI, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 213, May, 1911.

Patient sustained fall from a considerable height followed by paralysis of left vocal cord, the muscles of the palate, the constrictors of the

pharynx and of the left sterno-cleido-mastoid. The author concludes that a secondary hemorrhage had taken place near the area of the origin of the spinal nerve, assuming that this nerve and not the vagus controls the movements of the larynx.

LASAGNA.

687

Vincent's Angina. EDWIN H. PLACE, *Boston Med. and Surg. Jour.*, p. 720, Nov. 9, 1911.

After reviewing the history of the discovery of Vincent's angina, the writer discusses the disease from its clinical and bacteriological viewpoints, drawing conclusions from a personal experience of over eighty cases, and from the literature concerning the subject.

The disease must be differentiated from the initial stages of noma, from diphtheria, syphilis, stomatitis, tonsillitis, etc. Almost invariably the bacillus fusiformis and the spirochaete are found associated, and make the positive diagnosis by means of a smear, easy.

For treatment, general hygienic measures and mouth cleanliness are important. For local applications: "the tincture of iodine, potassium chlorate, hydrogen peroxide, glycerated borax, colored lights, etc.," are suggested. The writer obtains the best results from the local cleansing with hydrogen peroxide followed by the painting on of a two per cent solution of chromic acid, once daily. Cure occurred rapidly in from two to six days, with hardly an exception. The failure to recover the B. fusiformis in the smear accompanies the beginning of convalescence.

The paper offers so concise and thorough a discussion of the subject that the reader must be referred to the original article for more than this excerpt. A good bibliography is added.

BERRY (MOSHER.)

690

Infiltrating Epithelioma of the Floor of the Mouth. PRINCETEAU, *Gaz. hebdomadaire des Sci. Med.*, Jan. 8, 1911.

Abstracted in THE LARYNGOSCOPE, p. 774, July, 1911.

691

Pharyngeal Paresthesia as a Symptom of Tumors of the Digestive Tract.

A. PUGNAT, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 7, Jan. 7, 1911.

Abstracted in THE LARYNGOSCOPE, p. 1020, Oct., 1911.

694

Cosmetic Technic for Treatment of Complicated Hare-lip. A. REICH, *Zentralblatt für Chirurgie*, June 22, 1911.

In displacing backward an especially prominent pre-maxillary bone in an operation for double hare-lip, there is a tendency to the production of a pug-nose. Reich describes a method of avoiding this defect.

EDGAR (GOLDSTEIN.)

703

Epidemic of Chancres of the Lips From Kissing. J. F. SCHAMBERG, *Jour. A. M. A.*, p. 783, Sept. 2, 1911.

Shamberg reports an epidemic which developed from a "kissing game," and warns against promiscuous kissing. In the instance reported one of the participants in the game was a young man of 22 years who had a sore on his lip, the nature of which he affirms he did not know. Six of the girls whom he kissed developed chancres on their lips and one man was indirectly infected through the virus deposited on the lips of one of the girls. Another woman, kissed by the luetic at a later party also developed a sclerosis. The man asserts that the physician did not inform him of the nature of his lesion. Schamberg points out the responsibility resting on the physician to safeguard the general public. Ed.

705

Modification of Sense of Taste With Tumors in Posterior Cranial Fossa.

B. SCHOLZ, *Mittel. a. d. Grenzgeb. d. Med. u. Chir.*, Vol. 23, No. 4, 1911.

Scholz reports a case in which a neuro-fibroma in the cerebello-pontine angle produced disturbances in the taste in regions innervated by the intermedius. A diagram accompanies the article. Ed.

707

Lateral Pharyngitis. SCHUBIGER, *Corresp.-Bl. f. Schweizer Aerzte*, No. 2, 1911.

The author recommends snipping the band with scissors (Halle) or, in the less severe cases, applying trichloracetic acid. One must, of course, first determine by means of a probe whether the symptoms are referable to this area or to the naso-pharynx. Prophylactic measures are those aiding nasal breathing. The etiology is similar to that of an ordinary pharyngitis. Ed.

710

Influence of Glandular Pharyngeal Tissue (Waldeyer's Ring) in the Causation of Rheumatism and Endocarditis. B. R. SHURLY, *Detroit Med. Jour.*, p. 57, Feb., 1911.

The author expresses considerable skepticism in regard to the many conditions that are claimed to be the result of the infection of this lymphoid material, and particularly in regard to the rheumatic diseases, which are, as a rule, not clearly differentiated. He desires to lay great stress on a positive diagnosis from the internist's side, when we have a rheumatic affection, and would have it clearly defined as to what is meant by rheumatism, whether of microbic nature, some errors in diet or some other etiologic factors. Again, the laryngologist is to determine from the pathological point of view what kind of diseases of the tonsil, adenoids and other lymphoid tissue in the throat can be ascribed to the general secondary malady. The positive knowledge of the lymphatic destruction of the neck and the lymphatic glandular enlargements will go to show very frequently an indication for the attacking of the lymphoid tissue in the pharynx. Another important point is the influence

that diseased tonsils have on the enlarged thyroid gland and its symptoms of hyper-thyroidism. One very important fact is that this lymphoid tissue in the pharynx appears to have a physiological function, especially in childhood, becomes large as a consequence of its arresting infection, and, therefore, should not be removed, at least not until the second or third year of life.

The author concludes, finally, that rheumatism and endocarditis are in great measure results of diseased or infected tonsils which should be removed. Even as a prophylactic measure such tonsils are better out than in.

BECK.

712

Factors in Etiology of Oral Carcinoma. C. SINGER, *Qr. Jour. of Med.*, Oct. 5, 1911.

Singer draws his conclusions from a study of 700 cases during the last two years. He finds that carcinoma beginning in the oral mucosa may form a separate clinical entity, in which esophageal carcinoma should be included, but from which epithelioma of the lip should be excluded. These cases of oral cancer differ from the general population in that there is an overwhelming preponderance of males, a large percentage of whom have suffered from gout and syphilis. Many are stout, heavy, robust men, yet show evidence of renal interstitial change and arterial degeneration. Aneurysm and certain vascular diseases present certain analogies to some types of oral carcinoma, especially as regards age of distribution and it is probable that there are similar etiological factors.

ED.

715

Sarcoma at the Junction of the Pharynx and Esophagus Operated on Successfully After Preliminary Gastrostomy. SNOY, *Med. Klinik.*, Jan. 8, 1911.

Four weeks after the gastrostomy in the 75-year-old patient the general condition was so favorable that a sarcoma affixed to the posterior pharyngeal wall could be radically removed by means of a combined thyropharyngotomy.

ED.

716

Fatal Hemorrhage in a Case of Retro-pharyngeal Abscess. A. SOKOLOFF, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 3, p. 333, 1911.

Boy, aged 2 years, in whom the retro-pharyngeal abscess broke just as it was about to be incised. Profuse, chocolate colored fluid gushed out followed by a thick bloody flow. Ten minutes after the beginning of the hemorrhage, exitus. Autopsy revealed the fact that the hemorrhage had issued from the left internal carotid artery which at this point entered the bony canal of the pars pyramidalis of the temporal bone. Sokoloff found but one similar case (Franklin's) reported in the literature.

ED.

719

History of an Interesting Case of Lympho-sarcoma of the Pharynx. O. J. STEIN.

Original contribution to *THE LARYNGOSCOPE*, p. 702, June, 1911.

727

Retro-pharyngeal Abscess with Paralysis of the Esophagus. J. A. THOMPSON.

Original contribution to THE LARYNGOSCOPE, p. 1081, Nov., 1911.

728

Mikulicz's Disease with Report of Case of Lymphatic Leukemia in Child, with Marked Enlargement of Salivary Glands. W. TILESTON, *Am. Jour. of Dis. of Children*, Nov. 2, 1911.

The child was 2 years old. Large tumors of both parotids and both submaxillary glands; lacrimal glands not involved; histologic picture typical of lymphatic leukemia. August 30, red cells, 6,860,000, hemoglobin, 95 per cent, leukocytes 14,700. September 14, leukocytes 6,700. Tileston discusses the differentiation between lymphatic leukemia of the aleukemic or preleukemic type and Mikulicz' disease. He feels that the latter term should be reserved for cases of chronic, painless enlargement of the salivary and lacrimal glands in which pseudo-leukemia and leukemia can be excluded.

Ed.

731

Primary Orchitis with Secondary Parotitis; The Reverse of Metastatic Mumps. J. F. TORPEY, *Jour. A. M. A.*, March 11, 1911.

This is case of a young man of 18 years, who developed first orchitis of the left testicle, followed in six days by involvement of the right testicle. There was no history of previous mumps, although the disease was then epidemic; no history of gonorrhea, syphilis, tuberculosis or trauma. At the end of seven days, when the orchitis was subsiding, the patient developed a classical case of mumps, which ran its typical course. The case is interesting to otologists because it suggests that a metastasis to the labyrinth might take place from an orchitis as well as from a parotitis. In the case cited, however, there was no labyrinthine involvement.

HALSTED.

735

Dermoids of the Floor of the Mouth and Their Genesis. H. TRUEMPER, *Wr. klin. Wchnchr.*, p. 597, Sept. 17, 1911.

While dermoid of the floor of the mouth can only be explained developmentally, ranulae result entirely from retention-cysts. The only therapy is radical removal.

Ed.

741

Vincent's Angina; A Study of the Invasion of the Tonsil. W. P. WHERRY. Original contribution to THE LARYNGOSCOPE, p. 1007, Oct., 1911.

746

Vincent's Angina Treated with Salvarsan. ACHARD and FANDIN, *Soc. med. des Hop.*, April-May, 1911.

In this case both tonsils were involved as well as the soft palate. Wassermann and anamnesis, negative. The angina withstood all treatment. Since one of the two etiological agents is a spirillum, local applications of salvarsan were made, first in solution, later as a powder. The results were very satisfactory.

Ed.

749

Flap Splitting in Cleft Palate Operations. J. F. BALDWIN, *Lancet-Clinic*, Aug. 12, 1911.

In operating for cleft palate instead of "paring the edges" as is universally recommended it is urged that the edges be "split" to a depth of one-eighth inch or less. This method saves tissue and gives a relatively wider approximation of edges. A pair of sharp-pointed curved scissors are used. The author has always advised immediate operation on the hare-lip; in some instances he operated within the first twenty-four hours. The pressure thus exerted tends to lessen the opening in the palate which can be then operated on at about one year of age.

EDGAR (GOLDSTEIN.)

750

Treatment of Diseases of the Salivary Apparatus. J. C. BECK, *Ann. of Otol. Rhinol. and Laryngol.*, p. 667, Sept., 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1195, Dec., 1911.

751

Operative Treatment of Difficult Cases of Palate Defect After Infancy.

V. P. BLAIR, *Surg. Gynecol. and Obstetr.*, March, 1911.

In this article the author claims that most cases of congenital cleft-palate can be closed by what is known as the von Langenbeck operation.

He calls attention to certain ways of utilizing the operation in a few difficult cases after infancy and presents a plan of dealing with such which have sometimes been regarded as practically inoperable. A number of illustrations are given showing the palate before and after the operative intervention.

ED.

753

Surgical Operative Steps in Closure of Cleft-palate. G. V. I. BROWN, *Jour. of Ophth. and Oto-Laryngol.*, Nov., 1911.

The foremost consideration in all cleft-palate treatment is the nasobuccal relation. If the surfaces of the palate of an adult on each side of cleft are broad enough and the angle of their slant sufficiently acute to enable borders to be brought together in median line, then a plastic alone is indicated. Since direct compression without modifying bone-work would narrow nares the following is done. Cut through the molar ridge on the external surface of the upper maxilla and again behind its tuberosity and groove the bone between these points. The parts will yield under pressure and narrow the fissure without affecting the nasal region.

The author uses recumbent position on back, shoulders raised, head tipped back and to side. Ether, vaporized by heat, is blown into back of mouth. A modified Whitehead gag is used. Retention sutures of aluminum bronze wire and silver plates are used, while for coaptation formalized pyoktanin gut-sutures are used. Perforated lead shot is used to hold the wire sutures.

In patients with defective speech without apparent palate fissure the author has discovered in every instance that although union of soft

tissues of both hard and soft palates was complete, yet there has been an arrested development of the palate bones which left the hard palate short or with the outlines of a notch in median portion. STEIN.

761

Enucleation of the Tonsil. L. M. FREEDMAN, *Boston Med. and Surg. Jour.*, p. 535, April 13, 1911.

Freedman discusses the technic of tonsillectomy. He first separates the anterior pillar with a Leland knife. Then, entering the supra-tonsillar fossa with a two-edged knife, he dissects the upper part of the tonsil free with the finger, completing the operation with the wire snare.

BERRY (MOSHER.)

766

The Action of Salvarsan in Syphilis of the Upper Air-passages, Scleroma, Vincent's Angina and Scurvy. GERBER, *Arch. f. Laryngol. u. Rhinol.*, Vol. 24, No. 3, 1911.

Gerber comments on the rapid and energetic action of salvarsan in syphilitic mucous membrane-eruptions of the mouth, pharynx and nose. He has also used it for other forms of spirochetæ and their resulting affections. His instrumentarium consists of a glass funnel, rubber tube and metal cannula; beginning with sterile salt-solution intravenously to avoid air-emboli, and followed by 0.6 salvarsan. Among other luetic cases is mentioned a severe stenosis of the larynx, existing three years and treated during that period with inunctions, injections, iodine and bougies, and kept ready for an emergency tracheotomy, which was relieved four days after injecting salvarsan and the small laryngeal lumen restored to a normal glottis. One case of scleroma was treated; after two days the mucous membrane of the nose was found more moist, the soft palate more unstable, though the improvement was but temporary, possibly suggestive only.

Two cases of Vincent's angina (one of eight weeks standing) were injected, both were complicated by enlarged and sensitive sub-maxillary glands, syphilitic infection dented through a weak Wassermann showed in one, while the other proved negative. The sub-maxillary glands in both cases were markedly reduced the day following injection and patients discharged. In the eight weeks' case a smear showed entire absence of spirochetæ after twelve days, the other showed marked reduction in number after two days.

A sailor of 23 years, suffering from scurvy, very anemic, sub-maxillary glands infiltrated and sensitive, gums of lower teeth swollen, red and covered with grayish secretion; at the molars, white-coated ulcers which bled readily, a large ulcer on lower pole of left tonsil; fetor ex ore. Positively denies syphilis. Smears show large number of spirochetæ; two days following treatment, no more found in examining secretion taken from gums and tonsil; three days later discharged, tissues apparently normal. In all cases, the subjective symptoms of the secondary and tertiary forms of syphilis disappeared first. In fifty per cent of the cases, spirochetæ were absent within twenty-four hours following treatment. STEIN.

767

Salvarsan in Non-syphilitic Ulceration of the Mouth and Throat. P. H.

GERBER, *Muench. med. Wchnschr.*, Feb. 28, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1207, Dec., 1911.

770

Hare-lip; Modification and Extension of Owen's Operation. F. W. GOYDER,
Brit. Med. Jour., Sept. 2, 1911.

The modifications described by Goyder consist in: 1. Extensions of the Owen-Mirault flap. These result in a narrowing of the attached part of the lip without diminishing the effective length from corner to corner. 2. A vertical splitting of this flap. 3. The separation of a thick wedge-shaped ribbon of mucous membrane at the muco-cutaneous junction on the side opposite to that on which the Owen flap is cut, leaving it attached by the red margin and dovetailing it into the split Owen's flap. This ribbon is entirely removed in Owen's operation. This results in a greatly thickened red margin at the line of suture, which is not opposite to the end of the scar in the lip. It does not attract attention, nor does it become increasingly obvious as time goes on. 4. Special methods of dealing with the nostrils. Incise and separate the ala nasi at its junction with the cheek. Reflect the nasal flap. Suture through alae nasi, the nasal flap (if used), and back through septal side. Put a suture on the face to close the nostril in front. Deal with lip, remembering that its suture line must not be opposite to that in the nose.—*Ex.*

779

Surgical Treatment of Cleft-palate. J. H. JACOBSON, *Am. Jour. of Surg.*, June, 1911.

Jacobson emphasizes the necessity for early operation. The nasal cavity and naso-pharynx do not develop until the maxillary processes have united to form the hard palate. This occurs normally about the fourth month of fetal life. The defective articulation resulting from late operations in which the cleft has been well closed is due to the undeveloped naso-pharynx. Jacobson urges that operation be undertaken as early as the first or second day after birth unless the child be too weak; in such cases it should be performed within the first few weeks or months. The Lane method has been the most successful one. Ed.

781

Radical Removal of Tonsils and Adenoids. CHARLES G. KERLEY, *Archives of Pediatrics*, October, 1911.

During the past ten years the author has operated 371 times for the removal of tonsils and adenoids. The author uses the method of finger dissection, originated by Dr. Mathews, at present, having during the past eighteen months found it preferable to any other. He precedes the operation by a course of lactate of calcium. He uses ether or gas-ether for anesthesia. The only instruments required are the gag, tonsillotome and adenoid curette. In a few instances he has used a pillar separator and blunt curved scissors. PACKARD.

785

Peroral Route to the Base of the Skull, to the Posterior Nasal Aperture and to the Sphenoid Sinus. F. KUHN, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, p. 1161, Bd. 4, Heft 2, 1911.

Kuhn gets the material for this article from his work on "Peroral Intubation," published by Karger, Berlin, 1911.

801

General Anesthesia in Operations in the Pharyngeal Region and About the Neck. M. METZENBAUM.

Original contribution to *THE LARYNGOSCOPE*, p. 22, Jan., 1911.

806

Radium in Diseases of the Nose and Throat. T. G. OUSTON, *Jour. of Laryngol., Rhinol. and Otol.*, p. 505, Oct., 1911.

Ouston reports on five cases treated in this manner, and draws the following conclusions: Lupous affections of the nose and throat are benefited more by this therapy than by any other; its effects may be observed two or three months after treatment has been discontinued; the duration of a treatment should be but thirty minutes, if necessary the radium may be applied again to the same region; it is difficult to say how large a dose should be applied but though an insufficient treatment may temporarily arrest the evolution of the disease, it will rapidly develop again. Painful ulcerations are rapidly benefited by this procedure. Ed.

808

Technic for Treatment of Cleft-palate and Hare-lip. B. RIEDEL, *Muench. med. Wchnschr.*, Jan. 3, 1911.

Riedel states that the operation should not be undertaken before the child is well-nourished physically—when the child is from three to nine months old. Parents often urge earlier intervention, but the author disapproves of this. The technic is minutely described and the successful results related. Ed.

809

Modification of Sluder's Method of Tonsillectomy. L. C. ROOD, *Jour. A. M. A.*, p. 393, July 29, 1911.

Rood describes a modification of the Sluder method of tonsillectomy. This modification has been used by him in seventeen cases with perfect success, invariably removing the tonsil and capsule completely, rapidly and bloodlessly. "This modification consists in using the ordinary tonsil snare, passed over the tonsil external to the already applied guillotine. Specifically, after the tonsil has been pressed through the window of the guillotine, by the alveolar eminence of the mandible, and engaged by the blade of the guillotine, in the manner described by Dr. Sluder, the distal end of the snare loop is passed over the guillotine and under guidance of the index finger is placed posterior to, and thus external to, the tonsil and its capsule. Tightening the snare, in the usual manner for the particular snare, complete the removal." In no case has it been necessary to

go twice for any tonsil and the method is more rapid than any other. He does not remove any of the anterior pillar, but in other details follows closely the Sluder method.—*Ex.*

812

Lactic Bacterio-therapy in Bucco-pharyngeal Affections. SABRAZES, *Gaz. hebdom. des Sci. med.*, Oct. 1, 1911.

Offensive breath is frequently due to rhino-pharyngitis or chronic tonsillitis. The microbes collect in the mucous membrane and set up inflammatory processes. Neither enucleation, curettement nor incision can always remedy the condition. By letting lactic ferment disaggregate slowly in the mouth, these conditions may often be combatted. These bacteria multiply rapidly and counteract the putrid microbes in the tonsillar crypts, the fuso-form anginas, etc.

Ed.

820

Tonsils Removed with Special Reference to Quinin Anesthesia. B. D. SHEEDY, *Med. Rec.*, Oct. 21, 1911.

Four fatal cases are cited to show the dangerous effect of cocaine-adrenalin anesthesia. To avoid unpleasant consequences under local anesthesia, the author has employed with success a five per cent solution of quinin bisulphate. There appeared to be an increase of hemorrhage over the cases in which quinin was not used, but a complete absence of pain in all cases in which the solution was deposited outside the capsule of the tonsil and into the cellular tissue was observed. About one-half drachm of the solution should be introduced inside the border of the anterior pillar, and the same amount at a point opposite, between the capsule and the opposite pillar.

LEDERMAN.

821

Method of Tonsillectomy by Means of a Guillotine and the Alveolar Emersion of the Mandible. G. SLUDER, *Jour. A. M. A.*, p. 867, March 25, 1911, and *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, p. 903, No. 8, 1911.

The instrument which Sluder uses is a modification of the Mackenzie guillotine. Sluder has introduced an elliptical aperture with a long diameter transverse to the handle, the usual cutting-edge being left dull. The distinctive feature of his method is that by it the tonsil is completely removed out of its normal bed, forward and upward. Sluder describes the anatomical position of the tonsil and details his method in full. He states that this procedure is adaptable to all cases; embedded tonsils are removed as readily as the protruding ones. The operation requires but a few seconds.

Ed.

822

Uninterrupted Anesthesia in Operations on Face and Mouth. E. SOUCHON, *Surg. Gynecol. and Obstetr.*, Aug., 1911.

By means of a rubber tube introduced into the throat through the nose and mouth, Souchon obtains uninterrupted anesthesia in operations on the face and mouth.

Ed.

825

Enucleation of the Tonsil for Chronic Disease. W. S. SYME, *Arch. intern. de Laryngol.*, p. 17, Jan., 1911, and *Glasgow Med. Jour.*, p. 340, May, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 806, July, and p. 963, Sept., 1911.

829

Pre-operative Analgesia of the Tonsil by Injection of Nirvanin. VAQUIER, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 513, March, 1911.

Vaquier first pensils the tonsil with a stovain solution; then 2-5 cc. of a 5 per cent nirvanin solution is applied. Four injections (1 cm. deep) are made. After ten minutes the operation can be begun. The author states that nirvanin is far less toxic than the other local anesthetics.

Ed.

844

Two Cases of Frontal Sinusitis Cured by My New Method. CITELLI, *Chin. Chir.*, 1911.

After thoroughly scraping the frontal sinus and disinfecting it for four or five days by means of douches of perhydrol, formalin-solutions and hot-air, Citelli fills the sinus with Moosetig's preparation, temperature of about 55° C. Over this skin is sewed. The cosmetic effects are very good.

Ed.

847

Pathological Anatomy of the Frontal Sinus Mucosa in Purulent Frontal Sinusitis. F. FRONING, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, p. 543, Bd. 4, Heft 5, 1911.

In acute suppuration of the frontal sinus, the pathological process involves to a greater extent the sub-epithelial zone of the mucosa. In chronic suppuration, on the other hand, all parts of the mucosa are pathologically changed, the more important feature however being metaplasia of epithelium and development of hyperplastic and heteroplastic polyps.

GLOGAU.

851

Mucoceles of the Frontal Sinus. E. HAMAOUA, *These de Paris*, 1911.

The origin of mucoceles of the frontal sinus may either be due to mechanical causes (obliteration of the naso-frontal canal, vicious cicatrices, exostoses, congenital anomalies of the skeleton) to inflammation or infection, or to neoplasms. Hamaoua describes their development, and discusses the prognosis, which is good, and the therapy, which is an operative one.

Ed.

855

Bilateral Frontal Sinus Enlargement. KARBOWSKI, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, p. 551, Bd. 4, Heft 5, 1911.

While "sinusitis frontalis cum dilatatione," caused by mechanical pressure from within, is a rare disease, its bilateral occurrence is exception-

ally seldom met. The writer reports the following case: A female patient, 31 years old, suffered for one year from discharge of pus. She complains of severe headaches. A peculiar dislocation of the eyeballs downwards and externally combined with ptosis is present. An elastic tumor can be felt on both sides directly under the upper part of the orbit. The operation revealed in both sinuses the presence of a cystic formation of the size of an egg, located within the frontal cavity but protruding hernia-like into the orbita, the roof of the latter being extensively destroyed. Bacteriological examination was negative, the micro-organism being probably of the aerobe kind and having perished from lack of air. The differential diagnosis has to exclude chloroma (retrobulbar lymphomata) and Mikulicz's disease (symmetrical affection of the lacrimal glands).

GLOGAU.

857

Endothelioma of the Frontal Bone. N. MACLAY, *Jour. of Laryngol., Rhinol. and Otol.*, p. 301, June, 1911.

Patient, man aged 67 years, consulted a doctor because of painful swelling over the right orbit. Upon incision only blood escaped, but a raw, friable growth projected from the wound. Four days later patient consulted the author. Pungating mass showed no evidence of incision; it extended one-fourth inches below skin; its center corresponded with the position of the anterior wall of the right frontal sinus; probe could be passed into sinus and down through the fronto-nasal duct; two-thirds of anterior sinus wall, and large portion of posterior wall destroyed; growth extended $1\frac{1}{2}$ inches towards frontal lobe. Microscopic examination revealed endothelioma. Surgical intervention contra-indicated. Death within two months.

The interest in this case centers in the fact that there were no subjective symptoms, or any symptoms whatever, until the patient sought medical advice. The author feels that the frontal sinus was the seat of the growth.

Ed.

860

Method of Obliterating the Naso-frontal Duct and Cathetizing the Frontal Sinus. H. P. MOSHER.

Original contribution to *THE LARYNGOSCOPE*, p. 946, Sept., 1911.

865

Various Pathologic Conditions Involving the Frontal Sinus. B. R. SHURLEY, *Jour. A. M. A.*, p. 796, Sept. 2, 1911.

The most frequent pathologic condition is that resulting from a common cold in the head. Staphylococci; streptococci, B. pyocyaneus, B. influenza and the pneumonia germ are the ones usually found. Frontal sinus tuberculosis is rare, and when there is syphilitic infection it is usually due to ulceration in the neighboring regions. The other sinuses are more frequently involved in general systemic infection than is the frontal sinus; malignant tumors are rarely found in it. If they are present they are merely secondary (epithelioma and sarcoma). Some cases of

mucocoele and pneumatocele are recorded, as well as some disorders due to maggots, larvae and insects. Shurly urges preventative measures and the better treatment of common colds.

Ed.

866

Anatomic Study of Puncture of the Frontal Sinus. SIEUR and ROUVILLOIS, *Rev. hebd. de Laryngol. d'Otol. et de Rhinol.*, p. 225, March 4, 1911.

The intra-nasal method of opening the frontal sinus is again gaining adherents. Vacher has just devised new instrumentarium for this procedure. The authors feel that the numerous former unsuccessful cases were probably the result of insufficient knowledge of the anatomy of the region. For that reason they experimented on twenty-one cadavers and found that in every case they could penetrate into the frontal sinus by keeping certain anatomical points in mind. The authors detail these anatomical considerations.

Ed.

869

Frontal Sinusitis and its Complications. L. VAN DEN WILDENBERG, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 854, No. 9, 1911.

Van den Wildenberg mentions the cases recorded in the literature of successfully performed sinus operations in children and reports four of his own cases. The first was in a girl of 7 years, who, following mumps, developed symptoms of intra-cranial affection with swelling in the frontal sinus region. Operation revealed a well-developed right frontal sinusitis, as well as a sub-dural abscess. The second case, a girl of 8 years, developed a characteristic fronto-ethmoiditis, following the grip; operation showed a well-formed frontal sinus entirely filled with pus. The other two children were 13 years old; the one had a frontal sinusitis and the other necrosis of the frontal bone. In the latter case the existing ozena retarded the development of the frontal sinus. All these cases were cured by the operative interventions.

Ed.

871

Post-operative Double Frontal Sinusitis. Extensive Osteoma of Frontal and Nasal Bones and Orbital Fossae with Super-imposed Lipoma. Causal Factor, Yaws. C. D. VAN WAGENEN.

Original contribution to THE LARYNGOSCOPE, p. 643, May, 1911.

872

Mucocoele of the Sphenoid Sinus. C. E. BENJAMINS, *Arch. f. Laryngol. u. Rhinol.*, Bd. 24, Heft 3, p. 353, 1911.

Abstracted in THE LARYNGOSCOPE, p. 1093, Nov., 1911.

874

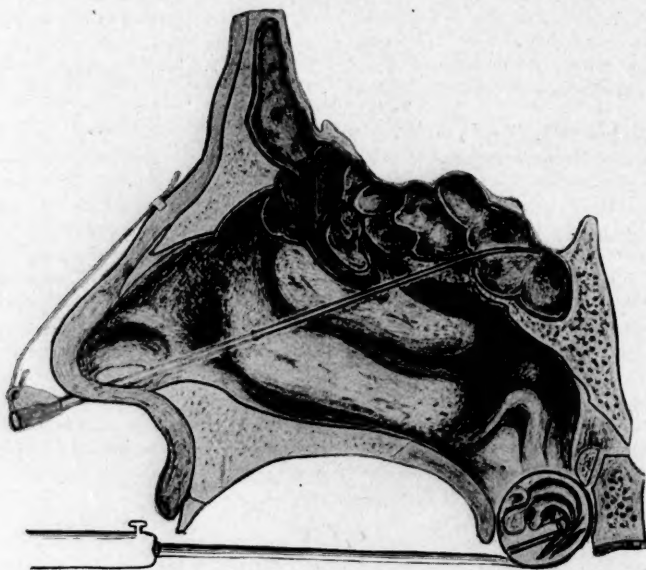
Attenuated Types of Suppurative Sphenoiditis in Relation to So-called Post-nasal Catarrh, to Headache with Mental Daze, and to Asthma. CASSELBERRY, *Ill. Med. Jour.*, Oct., 1911.

The vaso-constrictor effect of adrenalin facilitates the exploration of the sphenoid sinus, not of the typical, but of the attenuated type.

Though out of sight, the orifice of the sphenoid sinus can be entered by a probe, and the rhinoscopic mirror reveals the image of that portion of the probe which lies just outside of the osteum.

The specially constructed author's cannular probe is anchored to the dorsum of the nose by a flexible wire and piece of rubber plaster. A detailed description of this cannular probe and of the technic for puncturing through the sphenoid osteum is given.

Casselberry emphasizes the importance of the irrigation test to determine the presence of pus in the sphenoid cavity.



Casselberry's sphenoid cannular probe, its distal end inserted in the sinus in readiness for the irrigation test, its proximal end anchored to prevent slipping out and the rhinoscopic image as viewed to prove its position in the osteum sphenoidale.

A careful description and classification of purulent secretions of the sphenoid cavity is presented.

Headache, asthma and other symptoms of sphenoid suppuration and their method of differentiation are given. A study of two series of fifty to sixty cases has been made, and from the careful conclusions of these observations, Casselberry points out that this therapeutic treatment is productive of many satisfactory results without subjecting the patient to the necessity of radical operation.

GOLDSTEIN.

875**Removal of a Bullet from the Sphenoid Sinus by the Endo-nasal Route.**

CHIARI, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, March, 1911.

After resection of the inferior middle and superior turbinals and opening of the maxillary sinus, the bullet fell into the naso-pharynx and the patient expectorated it. Ed.

876**Blindness Due to Empyema of the Sphenoidal Sinus.** W. FREUDENTHAL,

Am. Medicine, May, 1911.

Man, aged 33, complained of painful dullness in head, and loss of sight of right eye. Empyema of right sphenoidal sinus found; ethmoid and frontal sinuses intact. Patient wandered to other physicians, one of whom removed parts of ethmoid cells. Patient returned again to author after two years, totally blind in right eye. Sphenoid sinus opened through nose and washed. Patient's head felt, at once, much relieved and much clearer. As soon as patient's condition improves the author will perform a radical frontal sinus operation. Ed.

877**Shot Removed from the Sphenoid Sinus Through the Endo-Nasal Passage.**

K. LANG, *Orvosi Hetilap*, No. 7, 1911.

The bullet passed through the right maxillary sinus, through the posterior, upper portion of the nasal, maxillary wall, penetrated the inferior portion of the vomer and the anterior wall of the left sphenoid sinus, and remained loosely in this sinus. It caused ocular disturbances and suppuration. Recovery eight days after removal. Ed.

879**Some Cases of Optic Neuritis Benefited by Operation Upon the Sphenoidal Sinus and Posterior Ethmoidal Cells.** SMITH, *N. Y. Med. Jour.*, p. 276, Aug. 5, 1911.

Reviewed in *THE LARYNGOSCOPE*, p. 67, Jan., 1912.

880**Visual Fields in Sphenoid and Ethmoid Sinusitis.** G. F. C. WALLIS, *Jour. Laryngol. Rhinol. and Otol.*, p. 242, May, 1911.

The author draws the following conclusions from a careful study of the reported cases and of eleven of his own: (1) Peripheral field contraction was present in every case; marked temporal and bi-temporal contraction, and bi-temporal hemianopsia is characteristic of chronic sinusitis of the posterior group (due to the toxic action upon the nerve by contact). (2) Peripheral contraction in the presence of gross neuritis is due to pressure from inflammatory edema within the optic canal, and in "fine" neuritis to pressure from hydrops vaginae nervi optici, both resulting from the action of toxins. (3) Peripheral field contractions without fundal changes with "fine" neuritis and with gross neuritis in sinus affections are but degrees of the same pathological process, and indicate the amount of poison which has reached the nerve. (4) Central scotoma prob-

ably only occurs in acute sinusitis, and results from pressure, and possibly partly from the local action of toxins. (5) The differences in the ocular symptoms of acute and chronic sinusitis depend upon the amount of toxin reaching the nerve. (6) The result of treatment of the diseased sinuses on the contracted fields is most beneficial when the suppurations are acute, and when optic neuritis is present. (7) Operative treatment of the sinuses may cause temporary diminution of the visual fields. (8) Ring scotoma may result from sphenoidal sinusitis. (9) The perimeter should always be used in suspected sinusitis. (10) White and green are the best test objects.

Ed.

881

Instructive Examples of Wrong Diagnoses in Cases of Tuberculosis of the Upper Air Passages. G. AVELLIS, *Monatschr. f. Ohrenh. u. Laryngorhinol.*, p. 825, Heft 7, 1911.

In this instance a diagnosis of tumor of the upper maxillary sinus was at first made. Later, however, the diagnosis of giant-celled sarcoma, made by the Senkenberg patholo-anatomical institute, was found to be correct.

Ed.

885

Removal of Foreign Body Lodged in the Plate of the Cribriform Ethmoidal. A. DOS SANTOS, *Rev. hebd. de Laryngol. d'Otol. et de Rhinol.*, p. 673, June 17, 1911.

Bullet penetrated behind the jaw, through the tongue and upper maxilla, injuring a portion of the cribriform plate of the ethmoid and lodging at the right base of the brain. Apart from the initial unconsciousness, the symptoms were severe; epistaxis, diplopia, pronounced vertigo, strabismus convergens, hemiparesis, and extreme pain in the right eye. The bullet was removed by the external route. It was discovered that the lamina papyracea of the right ethmoid was also fractured, and that an encephalocele had formed.

Radiography was of great aid both before and at the operation in locating the bullet.

Ed.

890

Non-suppurative Ethmoiditis. G. P. MARQUIS.

Original contribution to THE LARYNGOSCOPE, p. 12, Jan., 1911.

892

Histo-pathology of the Ethmoidal Labyrinth. A. W. PALMER, *Jour. of Ophth. Otol. and Laryngol.*, p. 321, Sept., 1911.

Because of the morphological differences in the structures of the ethmoid cells Palmer considers their diseased states very different from those of the other sinuses. These cells are apparently capable of receiving the serum and leucocytes from their blood supply more rapidly than these products are carried off by their veins or lymphatics, or thrown out of their ostia as mucous; therefore the ethmoid labyrinth is more prone to become diseased than the nasal or other nasal accessory cavities.

The diseases of the ethmoid are: (1) Acute inflammation; (2) chronic inflammation; (a) ethmoiditis hyperplastica cum polyposis, and (b) ethmoiditis suppurativa.

Ed.

896

Bone Cyst of the Ethmoid Cells. J. A. THOMPSON.

Original contribution to THE LARYNGOSCOPE, p. 152, March, 1911.

901

Anatomical Study on Local Anesthesia of the Superior Maxillary Nerve.

G. BARIL, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 273, Sept., 1911.

Dr. Baril is of the opinion that for operations on the maxillary antrum satisfactory local anesthesia may be obtained by the injection of a weak anesthetic solution through the posterior palatine canal into the region of Meckel's ganglion and the superior maxillary nerve in the pterygo-maxillary fossa. The buccal orifice of this canal is situated at the base of the third molar tooth. Its line of direction continued forward crosses the neck of the second molar tooth; continued backward it passes through the foramen rotundum at a distance of four and a half centimeters from the neck of the second molar tooth. The technic suggested is as follows: The mouth is wide opened. A platinum needle, not more than five centimeters in length, is introduced into the gum on the inner side of the neck of the second molar tooth. The body of the syringe rests on the lower lip. The needle is pushed on for about one centimeter till its point is opposite the base of the third molar tooth. It now engages the mouth of the posterior palatine canal, along which it is carried for a distance of four and a half centimeters from the point of insertion.

Dr. Baril has carried out this procedure frequently on the cadaver and considers that it would be of practical use. He has tried the method in one case (radical cure) and was successful in obtaining satisfactory anesthesia.—*Et.*

902

Study of Maxillary Cysts. H. BAUTZE, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.* Bd. 4, Heft 2, p. 99, 1911.

From 1894-1910, Bautze has observed forty-five cases of maxillary cysts. The presence of cholesteatin crystals in the cyst, roentgenography, as well as Gerber's welts, are important aids in the diagnosis. In most cases the therapy consisted of partial operation or in Gerber's modified operation.

Ed.

904

Case of Pure Malignant Naso-maxillary Myxoma With Fronto-orbital Propagation and Meningitis. BOTEY, *Ann. des. Mal. de l'Oreille, du Larynx du Nez et du Pharynx*, p. 513, No. 6, 1911.

According to the author no one besides Chiari and Hajek have found and removed myomata from the nasal fossae or sinuses. It is of interest to note that these neoplasm are far more malignant than sarcomata or tumors of embryonic tissues. Recoveries do occur though the prognosis is always doubtful.

Ed.

906

Polypi of the Maxillary Sinus. A. CANEPELE, *Boll. delle Mal. delle Orecchio della Gola e del Nase*, p. 213, Oct., 1911.

Man, aged 59, suffered for five months from a maxillary sinusitis. The diagnosis was verified by trans-illumination and the X-ray. Caldwell-Luc operation disclosed polypi filling entire cavity. Histologically they were found to be composed of granulation connective tissue with numerous small-celled infiltrations and small tubular glands. The clinical picture showed a bulging of the hard palate on the diseased side.

The author points out the likelihood of large polipi developing, in case of maxillary sinusitis in which the epithelial mucosa is hypertrophied, and of these polypi penetrating the nose and naso-pharynx and producing peculiar symptoms. Methods of examination, clinical symptoms, and the prognoses are discussed.

Ed.

907

Inflammation of the Antrum of Highmore in the New-born. C. CANESTRO, *Arch. f. Laryngol. u. Rhinol. u. Rhinol.*, Bd. 25, Heft 3, p. 492, 1911.

Contrary to the general belief, Canestro shows that the maxillary sinus is present in a child 26 days old. Mother had leucorrhea; baby girl strong and apparently normal at birth; after few days' closure of the nasal passage with mucous discharge; at 10 days, redness and swelling in left infra-orbital region spreading over entire periorbital region; exophthalmus; thick pus from left nostril; pus from upper, left alveolar edge. Diagnosis: Acute empyema of left maxillary sinus; operation without anesthesia. After two months entire cure; orbital fistula closed up with hardly any scar. In this case the infection took place by passage through the genital canal.

A report on investigations as to the average size of the antrum in the new-born, its infection and complications, the diagnosis of disease and the therapy is also to be found in this article.

Ed.

910

Necessity of Orthodontic Interference in Malformation of the Dental Arches and Maxillae. F. M. CASTO, *Cleveland Med. Journal*, p. 988, Dec., 1911.

Casto points out the following facts: (1) The work of the rhinologist and of the orthodontist, in many cases, very closely correlated. (2) The development of the upper maxillae and of the nasal structure is intimately associated throughout the formation of these bones. (3) The proper development of the bones of the face and nasal fossae is dependent more or less upon the normal occlusion of the teeth and their proper use in the act of mastication. (4) Orthodontic interference is advisable at the earliest possible time—as soon as the deformity is recognized. (5) The highest aim of the orthodontist is to establish normal occlusion in the permanent teeth, be it by preventative or operative measures. (6) Any nasal obstruction that causes permanent mouth-breathing will interfere with the growth of the maxillae, produce a high vault and malformation of the alveolar process and dental arches. Mouth breathing can

be cured only by the removal of these obstructions and correction of the dental arches. (7) The nasal chambers will be enlarged by the proper expansion of the dental arches and the establishment of normal occlusion of teeth. The article is well illustrated. Ed.

911

Four Serious Results, Two Fatal Cases, Following Puncture of Maxillary Antrum. CLAUS, *Passow's Beitr.*, Bd. 4, No. 1-2, 1911.

Claus describes one case of air-embolism and one of apoplexia cerebri following douching the maxillary antrum; also two fatal terminations after the same procedure. In one of these fatal cases the autopsy findings were negative; the other showed hemorrhages in the cardiac musculature and in the brain. Ed.

917

Cysts of the Antrum of Highmore. J. R. FLETCHER, *Jour. Ophth. and Otolaryngol.*, p. 6, Jan., 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 154, March, 1911.

919

Sarcoma of the Nasal Wall of the Maxillary Antrum. O. T. FREER.

Original contribution to *THE LARYNGOSCOPE*, p. 98, Feb., 1911.

924

Exitus Letalis After Maxillary Sinus Operation. F. HENKE, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 3, p. 441, 1911.

The Denker maxillary sinus operation was performed. Pulmonary abscess developed probably due to aspiration of pus. Fatal hemorrhage resulted. Ed.

925

Perforation of Alveolar Periosteal Abscess into Nose. J. HERZFELD, *Passow's Beitr.*, Bd. 4, No. 6, 1911.

J. HERZFELD, *Passow's Beitr.*, Bd. 4, No. 6, 1911.

Herzfeld reports two cases, in which a periosteal alveolar abscess broke through the floor of the nose. Ed.

929

Excision of Superior Maxilla for Sarcoma of Antrum. W. B. JOHNSON, *Jour. Med. Soc. of N. J.*, Nov., 1911.

Injury in a woman, aged 33 years, was followed by a swelling which continually increased in size. No history of cancerous disease. The growth filled the nostril, perforated the palate, entered the orbital cavity, involving nasal and ethmoid bones. Curetment of ethmoid. Laboratory examination revealed spindle-celled, alveolar sarcoma. No recurrence fourteen months after operation. Ed.

931

Chronic Purulent Maxillary Sinusitis of Dental Origin. Six Months' Daily Washing Through the Alveolar Without Result. Twenty-eight Washings Through Inferior Meatus. C. J. KOENIG.

Original contribution to *THE LARYNGOSCOPE*, p. 640, May, 1911.

932

Accidents During Puncturing Upper Portion of the Antrum of Highmore and Their Prevention. E. KRONENBERG, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, p. 285, Bd. 4, Heft 3, 1911.

Kronenberg classifies the accidents as those (1) independent of the place of puncture (deaths and accidents due to cocain and novocain, and wound infections), and (2) those due to anatomical variations.

The author discusses the various technics, especially as to the place of puncture. He prefers entering the maxillary sinus in the middle third of the inferior meatus high up under the attachment of the inferior turbinate. The author also describes a cannula specially constructed for this purpose. Ed.

950

Calculus of Submaxillary Gland Diagnosed by Radiography. J. RATERA, *Rev. Clin. de Madrid*, June, 1911.

Patient, aged 41 years, had had a severe inflammation on the right side of the face, for the last four years, and a small calculus was expelled from the submaxillary gland. Since then he had had frequent inflammatory attacks which gradually increased both in severity and frequency, and brought him under the observation of Gereda. The latter explored Wharton's duct by means of a stylet, with negative results. However, a radiograph made by Ratera clearly revealed the presence of a calculus, the size of a nut, but the stone was very obscure. Gereda removed the gland and the patient recovered completely.

The author points out the value of radiography in these cases, and states that it is the only means of making a positive diagnosis. Ed.

953

Perithelioma of the Antrum Apropos of Two Cases. K. SAKAI, *Arch. f. Ohrenh.*, p. 1, Bd. 85, Heft 1-2, 1911.

Case 1. Man, aged 71, complained of progressive difficulty in breathing through left nostril. Examination revealed a mobile, partially decayed tumor which bled easily upon being touched. It was visible, post-rhinoscopically, in the left choana. Turbinals could not be seen; no glands. Upon removing the tumor the lateral nasal wall was found to be missing. The growth sprang from the left maxillary sinus. Recurrence after three months; excision. The growth was composed of numerous small whitish-red tumors with smooth surfaces. Microscopical findings: The connective tissue stroma was chiefly composed of blood-vessels. The parenchymal cells were large, epithelial-like, rich in protoplasm, polygon-cylindrical shaped and were situated directly on the external wall of the blood-vessels, forming a covering.

Case 2. A man of 63 years noticed for several months a rapidly-growing swelling on the right upper maxilla. Examination: Right maxillary antrum somewhat enlarged; white, centrally decaying tumor on alveolar process. By passing a sound into the sinus through the middle meatus the mass was reached; resection; recovery. The tumor

sprang from the lateral wall of the antrum. Microscopic examination revealed conditions similar to case 1.

The author points out the difficulty in differentiating these cases from carcinoma. The presence of tumor-cells within the bony marrow veins points to the fact that the growth must have broken into the venous blood-stream; therefore, there are possibly limitations to the relative benignancy of these angio-sarcomata. Ed.

956

Some Anatomical and Pathological Conditions of the Antrum of Highmore in the Australian Aboriginal. H. R. SMITH, *Brit. Jour. of Dental Sci.*, March 24, 1911.

Smith describes minutely several specimens which he has prepared and studied by cutting the septa vertically. Ed.

965

Acute and Chronic Inflammation of the Maxillary Sinus. Its Recognition and Treatment. T. C. WORTHINGTON.

Original contribution to THE LARYNGOSCOPE, p. 628, May, 1911.

967

Eye Complications Arising From Diseases of the Nasal Accessory Sinuses. A. H. ANDREWS, *Jour. A. M. A.*, p. 622, Aug. 19, 1911.

The relation between purulent accessory sinus disease and orbital cellulitis has been recognized for some time. The infection may spread through bone, or by means of the blood or lymph-channel. Some authors state that fifty per cent of lacrimal diseases are of nasal origin. The nose should be examined in all cases of dacryocystitis, lacrimal abscess and epiphora. Andrews says that the pathologic relation between the sinuses and intra-ocular diseases is not yet thoroughly understood; but the simultaneous occurrence of iritis, chorioiditis and suppurative sinus disease should not be regarded as a mere coincidence. Ed.

970

Operability of Hypophysis Tumors. E. BODE, *Deut. Ztschr. f. Chir.*, May, 1911.

Bode reports a case of hypophyseal tumor which was operated twice by the sphenoid route, but in which autopsy revealed the technical impossibility of a total removal. Ed.

971

Diagnosis of Associated Diseases of the Eye and Nasal Accessory Sinuses. F. BRAWLEY.

Original contribution to THE LARYNGOSCOPE, p. 1013, Oct., 1911.

975

Association of Suppurative Disease of the Nasal Accessory Sinuses and Acute Otitis Media in Adults. CORNELIUS G. COAKLEY, *Am. Jour. of the Med. Sci.*, February, 1911.

The author reports a number of personal observations. His conclusions, based upon them are of great interest. (1) The severer types

of acute rhinitis, accompanied by acute infection of the nasal accessory sinuses, are far more apt to be accompanied by aural disease than the milder types of acute rhinitis. (2) It is rare for a patient with acute sinus disease to develop a complicating otitis media if he comes to the rhinologist early for treatment. (3) The early recognition of acute disease is important for the prevention of the development of acute otitis media. (4) The fact that acute otitis media usually develops on the side of the affected sinus leads to the belief that pus from the various sinuses bathes the pharyngeal orifice of the Eustachian tube and is thence forced into and affects the tympanum. (5) Cases of acute otitis media developing in connection with sinus disease are particularly apt to involve the mastoid. (6) Chronic sinusitis is much less prone to involve the ear than the acute.

PACKARD.

976

Orbital Complications in Diseases of the Nasal Sinuses. C. COHEN and F. REINKING, *Beitr. z. Augenh.*, Heft 78, 1911.

Orbital abscess was the most frequently observed complication, i. e., in eleven of the twenty-five cases. Seven were due to acute, three to chronic purulent sinusitis. Of the seven cases of mucocoele, four originated in the frontal sinus, three in the anterior ethmoid cells. One case of retro-bulbar neuritis was entirely cured after operation on the posterior ethmoid cells and sphenoid sinus. The orbital portion of the optic nerve is endangered in phlegmon and phlebitic processes especially after maxillary antrum-disease. Operation is usually necessary to relieve the condition. The authors urge the collaboration of oculist and rhinologist to subserve the best interests of the patient.

ED.

977

Latent Sinusitis. GEORGE F. COTT, *Buffalo Med. Jour.*, Aug., 1911.

After illustrating by means of schematic drawings the anatomy and relations of the various sinuses, the author describes the pathologic conditions that he found in these cases of latent sinusitis in that frequently the bone was bare and the nerves in contact with the bone. Very frequently these cavities are filled out with degenerated tissue. He classifies them into the suppurative, hyperplastic and a dry stage. This latter is a sequence to the suppurative. The symptoms are thoroughly gone into with special reference to the pains and mental symptoms. The effect on the lower respiratory tracts, as larynx, trachea and bronchi, also on the gastro-intestinal tracts, is vividly described, as is also the effects on the orbital contents, with special reference to blindness. That these conditions are amenable to treatment by the proper attention to these sinuses is forcibly brought out.

BECK.

980

Some Manifestations of Pituitary Tumors. J. J. EVANS, *Brit. Med. Jour.*, Dec. 2, 1911.

Evans discusses manifestations due to hyperpituitarism and those due to hypopituitarism, and points out the possibility of these symptoms be-

ing due to a perverted action and interaction of several ductless glands. However, our knowledge is so limited that no exact hypothesis can be reached.

Ed.

987

Syphilis of the Accessory Sinuses and Their Complications. GERBER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, p. 55, Bd. 4, Heft 1, 1911.

Gerber reiterates his previous remarks that syphilis of the accessory sinuses seldom produces changes in the sinus walls. Changes in these walls are usually of a purely inflammatory nature. In conclusion, Gerber cites several articles which have been published recently and which show that authors do not first digest the articles previously written on the subject before giving their opinions.

Ed.

989

Mucocele of the Nasal Accessory Sinuses; Report of Three Cases. H. HASTINGS, *Ann. of Otol. Rhinol. and Laryngol.*, p. 638, Sept., 1911.

The interest in these cases centers in the negative nasal findings and the marked facial deformity in each case. The first case was a mucocele of the ethmoid, the second, one of the antrum, and the third a case of mucocele of both frontal sinuses. The author discusses their etiology and differential diagnosis and also the therapy.

Ed.

993

Accessory Sinus Suppuration in Scarlet Fever. T. HUBBARD, *Am. Jour. of Dis. of Children*, July, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 74, Jan., 1912.

994

Nasal Accessory Sinuses. L. M. HURD, *Can. Lancet*, Nov., 1911.

The writer believes that the usual cause of accessory sinus trouble is a deformed middle turbinate, associated with a septal deviation, an enlarged ethmoidal bulba or a crowding of the uncinate process upon the naso-frontal duct and superimposed upon these abnormal anatomical conditions, an infection of the nasal mucosa. He divides the cases into acute and chronic, mild and severe and outlines the treatment in each.

WISHART.

996

Blood-pressure Raising Properties of the Hypophysis Cerebri. R. KLOTZ, *Muench. med. Wehnschr.*, May 23, 1911.

Klotz calls attention to the pronounced effect which pituitary extract exerts on all involuntary muscles and on the circulatory system. In animals the rise in blood-pressure was equal to that after the injection of adrenalin. If the pressure was low prior to the injection the rise is greater than if it was high, suggesting a cell-complex action. Eighteen cases of atony of the uterus are reported in which pituitary gland extract proved very beneficial.

Ed.

1001

Relation of the Internal Carotids and Optic Commissure to the Pituitary Body. O. H. MACLAY.

Original contribution to THE LARYNGOSCOPE, p. 956, Sept., 1911.

1003

Consideration of Some Cases of Caseous Rhinosinusitis MASSIER, Rev. hebdom. de Laryngol. d'Otol. et de Rhinol., May 28, 1911.

Reviewed in THE LARYNGOSCOPE, p. 875, Aug., 1911.

1013

Injuries to the Orbit. G. E. SEAMAN, Wis. Med. Jour., Nov., 1911.

In discussing the etiology of these injuries the author says "unwise interference or misdirected efforts for the relief of surgical disease in the ethmoidal, sphenoidal, frontal, and antral cavities have frequently resulted in perforation of the orbital cavity and in some cases with extremely serious results." One instance of an ethmoidal operation is noted that resulted in hematoma causing paralysis of internal rectus, optic atrophy and blindness. In another case a fluid forcibly injected into the antrum through an alveolar opening was followed by edema of the orbit, congestion of the optic nerve and finally blindness in both eyes.

EDGAR (GOLDSTEIN).

1014

Rapidly Progressing Nasal Sinus Disease with Cerebral Complications.

W. SCHULZE, *Passows Beitr.*, Bd. 5, Heft 1, p. 48, 1911.

The first case was one of severe influenza which ran its course very rapidly, complicated with empyema of the sphenoid, frontal, ethmoid sinuses, and a fatal meningitis. The primary infection spread through the sella turcica. The author points out that in suppurative sphenoid sinusitis which involve the cranial cavity eye disturbances, namely central scotoma are among the early symptoms. These symptoms should be considered in making a diagnosis.

In the second case the lamina papyracea was perforated while removing the right middle turbinate and a part of the ethmoid cells; a profuse hemorrhage into the right orbit resulted. One year later, independent of this disorder, following the grip, an acute suppurative ethmoiditis developed, accompanied by a slight frontal sinusitis. Retrobulbar suppuration; operative intervention; death through meningitis. The infection spread to the cranial cavity from the orbit through a fistula which opened close to the crista galli and caused dural perforation.

Ed.

1018

Tumors of the Hypophysis. F. STRADA, *Virchows Arch.*, Jan., 1911.

Strada reviews the thirty-one cases recorded, studying them comparatively, apropos of a case of his own in a girl of 19 years. He also gives the post-mortem findings in this case. The author discusses the connection between the hypophysis and the other ductless glands and the physiologic importance of the hypophysis.

Ed.

1032

Operative Treatment of Suppurative Sinus Diseases Producing Orbital Complications. J. H. BRYAN, *Jour. A. M. A.*, p. 624, Aug. 19, 1911.

The ethmoidal and sphenoid sinuses are the ones most frequently involved in orbital disease, very rarely the maxillary. The symptoms depend upon the sinus involved and the nature of the disease. If the sphenoid or ethmoid sinus be the complicating factor, the endo-nasal method may be used; while for frontal sinus complications or even for those of the other sinuses not otherwise relieved the external or radical method should be used. Bryan prefers the Killian method for relieving a suppurative frontal sinusitis with or without sphenoid, ethmoid or eye complications. The technic is detailed. Ed.

1033

My Relatively Simple Method of Hypophysectomy Through the Natural Route. P. CITELLI, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 737, No. 8, 1911.

Citelli feels that rhinological methods are undoubtedly much to be preferred to surgical methods by the artificial route. Employment of the former method will result in a perfected technic which will finally solve the problems of the hyphosis. The author describes several procedures including his own; he then points out the advantages of his method in respect to simplicity and practicability. Ed.

1035

Plastic Closure of Persisting Retro-auricular Wounds After Antrum Operation. GABE, *Passows Beitr.*, Bd. 4, Heft 5, p. 354, 1911.

Gabe reports on twenty-four cases which he has operated; in four cases the plastic was performed in connection with the primary operation, as an experiment. In three of these cases intercurrent disease set in; so the author draws no conclusion as to the merit of combining the two operations. Ed.

1036

Preservation of the Anterior Wall in the External Frontal Sinus Operation. T. J. GALLAHER.

Original contribution to *THE LARYNGOSCOPE*, p. 1074, Nov., 1911.

1040

Endo-nasal Removal of Hypophysis Tumors. O. HIRSCH, *Berl. klin. Wchnschr.*, Oct. 23, 1911.

Hirsch reports twelve cases thus operated, two of which terminated fatally. However, the author states that the technic was in no way responsible for these fatalities. In the other ten cases the tumor was successfully removed and the acromegaly, headache and visual disturbances were relieved. The endo-nasal method is applicable in all cases in which the tumor bulges toward the sphenoid sinus. Hirsch removes the middle turbinate, cures the ethmoid cells, cuts away the anterior wall of the sphenoid sinus and thus exposes the sella turcica. The technic is described in full, as is also the after-treatment. Ed.

1043**Determination of Pus in Diseases of the Accessory Cavities of the Nose.**

H. HORN, *Cal. State Jour. of Med.*, Feb., 1911.

The apparatus described by Horn consists of an Hymanometer with a nasal piece and a metallic pump whose pressure is constant. By means of this manometer the amount of pressure in the cavity can be determined. It may also be used for hyperemic treatment. Ed.

1044**Some Lessons Drawn From a Series of Twenty-eight External Operations on the Frontal Sinus and Ethmoid Labyrinth.** H. HORN, *Jour. A. M. A.*, p. 793, Sept. 2, 1911.

Horn states that there is no question but that the most successful external operation on the sinuses is that of Riedel. But because of the terrible mutilation and deformity it has been abandoned in favor of the Killian. Killian's operation is defective in so far that dead spaces are left, drainage is difficult and therefore it is impossible to foretell the results. Horn feels that the Killian operation, too, is a very dangerous one and that it should be performed only under the most urgent conditions. It should be preceded by thorough intra-nasal treatment covering possibly a period of months; if possible the diseased sphenoid and antrum should be healed previously; and following the operation there must be constant and perfect drainage. Horn discusses details in the technic. Ed.

1046**Treatment of Inflammatory Diseases of the Accessory Nasal Sinuses.** G.

KILLIAN, *Deut. med. Wchnschr.*, April 30, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1125, Nov., 1911.

1047**Technic of Taking X-ray Pictures in Diseases of the Accessory Sinus of the Nose.** KUCHENDORF, *Fortschritte a. d. Geb. d. Roentgenst.*, Bd. 17, No. 1, p. 8, 1911.

Kuchendorf discusses fully the proper positions of patient and of tubes, the ventral position in the former being the preferred one. Ed.

1048**Endo-nasal or Extra-nasal Treatment of Maxillary Sinus Suppuration.**

LAGERLOEF, *Jub. Vol. of Prof. Berg*, March 27, 1911, and *Nordiskt med. Arkiv.*, 1911.

Lagerloef has treated 168 cases of acute and 219 cases of chronic empyema. Dental empyema did not show a rapid healing-tendency. Acute cases cleared up rapidly, syringing either through the natural openings or through an artificial one made through the lower meatus. With the Cooper method the author had little success and he feels that it is vastly inferior to treatment by the endo-nasal route. Even in chronic empyemata Lagerloef had better results with the endo-nasal method (opening through the inferior meati) than with the external. In cases of dental empyemata the external method has its distinct advantages. Ed.

1054**Technic for Radical Operation for Chronic Frontal Sinus Suppuration.**

LUC, *Rev. espan. de Laryngol.*, No. 8, 1911.

Since 1907 Luc employs a simplification of Killian's technic combined with features of Jacques' operation; one of the modifications being local anesthesia. (He reports ten cases showing the successful results obtained, no deformity resulting.) The ethmoid cells around the infundibulum should be well opened to avoid re-infection and intracranial complications. Curettage is done, under the guidance of the touch, with a long, slender curette, through the opening in the floor of the frontal sinus. The cavity is washed with a solution of twelve per cent hydrogen peroxide and boiled water and tincture of iodine applied. Then iodoform powder is dusted in and the wound allowed to heal. After about ten days the bandage and stitches are removed. Usually this treatment suffices, but if more extensive treatment is necessary the author indicates its nature.

Ed.

1055**Radical Frontal Sinus Operation.** J. E. MACKENTY and G. H. COCKS, *Med.*

Rec., July 1, 1911.

A modified Killian operation, as suggested by Dr. A. Knapp, without removal of the anterior bony wall, and with a single periosteal incision. The lacrimal sac is elevated from its groove and pushed aside with the periosteum. The entire floor of the frontal sinus is removed as well as the nasal process of the superior maxillary bone. The entire ethmoidal labyrinth is removed including the plate of bone forming the inner wall of the orbit. If the sinus extend high up, a window resection is made, through which the cavity can be inspected and curetted. The external wound is closed by sutures, a cigarette drain into the nose being employed. Sutures are removed in twenty-four hours to avoid stitch-scars. Six cases are reported.

LEDERMAN.

1058**Surgery of the Hypophysis Cerebri.** E. MELCHIOR, *Berl. klin. Wchnschr.*,

Aug. 7, 1911.

Melchior gives an historical review of the surgical work that has been done on the hypophysis and also details what is known of its functions. In cases of hypophyseal disturbances, the author advises immediate operative intervention, headache and visual disturbances being regarded as sufficient indication for immediate operative procedure.

Ed.

1063**Opening of Antrum by Nasal Route, in Three Stages.** E. RICHTER, *Arch.*

f. Laryngol. u. Rhinol., Bd. 25, Heft 3, p. 489, 1911.

Richter discusses the various technics and details his own. The advantage in his consists in the fact that he preserves the inferior turbinate and obtains a large opening.

Ed.

1068

Anatomical and Surgical Desiderata in the Exposure and Removal of the Pituitary Gland. A. EMIL SCHMITT, *Ann. of Surg.*, Jan., 1911.

To expose the sphenoidal sinus, an incision at the root of the nose and from there downward is sufficient and renders opening of the frontal sinus unnecessary. An incision is made on either side, starting at the widest part of the bony nasal aperture, and passing upward to the depression at the root of the nose. These two incisions are united by a cross incision. The Gigli saw is now used to free the nose entirely from its bony attachments. The hinge of the soft part, which remains below, contains the terminal branches of the facial arteries which will nourish the osteopathic flap thus formed. The anterior wall of the sphenoidal sinus is finally brought in view by the removal of a wedge-shaped section of the septum. The anterior wall of the sphenoidal sinus is removed by a chisel and bone-cutting forceps, the prominence is then apparent on the posterior wall. This prominence is the depression caused by the floor of the sella turcica, and that part of it corresponding to the median line of the skull must be removed to reach the pituitary gland. The removal of the gland can be accomplished by a long-handled scoop or curette, after which the nose is brought back into place. PACKARD.

1069

Surgical Treatment of Frontal Anthritis. SIEUR and ROUVILLOIS, *Rev. hebdom. de Laryngol.*, May 27, 1911; *Arch. internat. de Laryngol.*, May-Oct. 1911; *Ann. des Mal. de l'Oreille*, No. 5, 1911, and *Prat. Med.*, No. 9-12, 1911.

The author studied the literature and mentions the following complications after external frontal sinus operation: Hemorrhages (2); orbito-ocular disturbances (17); osteomyelitis (3); thrombo-phlebitis and septicopyemia (2); meningitis (30). Following intra-nasal operation they find most frequently encephalitis and meningitis. They recommend removal of middle turbinate and polypi, and curettage of ethmoid cells intra-nasally, before the external operation. Only local anesthesia should be used. They feel that the operation will be perfectly successful when the proper precautions are taken. ED.

1071

Endo-nasal Removal of Hypophysis Tumor. G. SPIESS, *Muench. med. Wchnschr.*, Nov. 21, 1911.

Amblyopia, decrease in the field of vision and X-ray examination pointed to tumor of the hypophysis in spite of the absence of sensory symptoms and organic changes. The tumor was removed by bilateral nasal operations. It was found to be a chordoma. The results in this case were excellent, yet the author states that the prognosis is always doubtful. ED.

1073

Rapid and Simple Method of Making a Large Opening Into the Maxillary Sinus Through the Inferior Meatus. Claoue's Operation. A. G. TAPIA.
Rev. espan. de Laringol., Otol. y. Rinol., p. 193, March-April, 1911.

Although a stout advocate of the Caldwell-Luc method, Tapia realizes that in certain cases it is unnecessary to perform such an extensive operation. He, therefore, uses the Claoue method, which he describes fully. He has devised a special, very practical gouge, which reduces the time of the procedure to five minutes, and also greatly simplifies the technic.

Ed.

1075

Treatment of Chronic Frontal Sinusitis by the Endo-nasal Route. L. VACHER, *Bull. d'Oto-Rhino-Laryngol.*, p. 108, April, 1911, and *Rev. hebdomadaire de Laryngol.*, p. 513, Oct. 28, 1911.

Vacher has been successfully using this procedure for several years. The author describes his technic in detail. A thorough knowledge of the anatomy of the anastomosis of the ductus naso-frontalis with the nasal cavity is absolutely necessary in order to grasp the technic.

Ed.

1076

Improved Technic for Illumination of the Nasal Sinuses, Orbit and Middle-ear. A. VON GYERGAI, *Deut. med. Wchnschr.*, Aug. 31, 1911.

Gyergai uses an electric lamp, the holder bent sideways at a right angle, this branch being long enough to be introduced to the depths of the maxillary sinus, close to the ear. He has applied it in thirty-eight cases and has been amazed at the instructive oversight thus permitted.

—Ex.

1081

Large Laryngeal Polypus at Epiglottis. L. LEDOUX, *Ann. des la Policlin. centrale*, p. 345, Dec., 1911.

Man of 55 in whom neither tuberculosis nor syphilis was suspected had a hoarseness in his voice since the last six months; pain, frequent cough, with profuse, clear, frothy expectoration. Laryngoscopy revealed a smooth, red tumor the size of a hazel-nut, covering the cords and attached to the anterior surface of the epiglottis near Czermak's tubercule. Under local anesthesia, the main tumor was removed with the cold snare, and at a second sitting a small accessory tumor was also removed. Microscopic examination showed the growth to be a fibromyxoma. Recovery without recurrence seven months after operation.

Ed.

1083

Tropical Lymphangitis of the Epiglottis. O'ZOUR, *La Clin.*, April 28, 1911.

Lymphangitis is a very frequent and very tenacious tropical disease and is not limited to any particular region, although it is of rare occurrence in the epiglottic region—in six years the author observed but six cases in this location. The first symptoms are sore areas in the throat which multiply rapidly; then the neck swells. After this, fever sets in. When the disease has progressed to this stage, deglutition is im-

possible, hypertrophy of the cervical ganglion, painful upon palpation; no dyspnea, cough nor expectoration. The oro-pharynx is red, the base of the tongue is red, the linguo-epiglottic sinus is the seat of the edema. The larynx remains unaffected, though it may be involved. Nevertheless the dyspnea is moderate.

The symptoms soon retrograde, the duration of the disease varies from eight to twenty-five days. Occasionally the abscess opened spontaneously. The therapy consists of sedatives, bathing the neck with a solution of alcohol and camphor.

ED.

1084

Regeneration of Epiglottis After Total Laryngectomy for Specific Stricture of Larynx. F. SEYROUT, *These de Lyon*, 1911.

The author draws the following conclusions: The epiglottis regenerates after total laryngectomy due to its vascular supply, from the upper laryngeal artery, which is a branch of that of the upper thyroid, from the posterior branch of the artery of the dorsum of the tongue (the branches of the lingual artery anastomose with those of upper laryngeal artery). Thus, even after total laryngectomy, the circulation is re-established. Blood-vessels should always be spared whenever this will aid regeneration.

ED.

1085

Spasm of the Glottis as Sole Manifestation of Tetany. H. TRIBOULET and HAEVIER, *Bull. de la Soc. de Ped.*, June, 1911, and *Ann. de Med. et Chir.*, p. 689, Nov., 1911.

In a child, 13 months old, even the Chvostek sign was absent; merely spasm of the glottis pointed to excessive nervous excitability. The authors urge that the electric reaction should be tested in all cases of spasm of the glottis. In this case it was extreme. They feel that suffocation due to glottic spasm has been often wrongly ascribed to thymic enlargement.

ED.

1087

Speech Work in New Zealand. A. G. BELL, *Volta Rev.*, p. 677, Feb., 1911.

Eleven miles from Christchurch, the third largest city in New Zealand, there is the only New Zealand school for the deaf. Bell found the conditions there very cheerful and productive of good results. In the main the work and the methods employed are similar to those preferred in this country.

ED.

1094

Defects of Speech Among Primary Pupils. G. FERRERI, *Volta Rev.*, p. 31, April, 1911.

Many of the speech defects in children could be corrected by careful attention to the child in early infancy, especially to its breathing. Speech-defect in school children are due to: (1) retarded development of language; (2) organic and physiological anomalies; (3) bad habits of pronunciation; (4) nervous anomalies; (5) defects in dialect. Of the 69,947 boys examined 4,641 showed speech defects, (3,368 dyslalia and

1,273 various forms of stammering). Of the 61,676 girls, 3,134 were affected with speech defects (2,481 dyslalia and 653 stammering). Researches in Italy, Holland and Belgium point to the fact: (1) s and z are the letters usually mispronounced, then r, l, c, g, t, d; (2) stammering caused by the percentage of fright, timidity, etc., is associated with forms of neuropathy; (3) the diminution of these defects in the higher classes is often due to the fact that these defectives had left the school. Ed.

1095

Voluntary Diplophonia in a Singer. FLATAU, *Stimme*, p. 97, Jan., 1911.

Although in some pathological cases (bilateral nodules) one at times finds diplophonia, this is the first recorded case in which this phenomenon could be produced voluntarily. The singer was of Hungarian nationality. Ed.

1105

Fifty Years of Research in Aphasia. KARL HEILBRONNER, *Muench. med. Wchnschr.*, April 18, 1911.

Heilbronner points out the pioneer work done in this subject by Broca and Wernicke and gives a critical and historical review of the advances made since then. Ed.

1108

Fifty-SIX...SCANL... May 18 8.30....

Galen's Theory on the Voice. K. KASSEL, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 242, 1911.

Until Galen's time our knowledge of the function of the voice was very limited. By means of vivisection Galen studied voice-formation; he was the first to give data on the normal conditions by which the pathological could be differentiated, and to urge systematic preventative voice therapy. Ed.

1109

The Voice-question in Former Years. C. KASSEL, *Stimme*, p. 161, March, 1911.

Gallen mentions the importance of powerful respiration in singers and orators; Celse holds that speaking in a loud voice is part of the treatment for gastric affections; Celuis Aurelianus recommends it in head affections and aphonia; Antyllus recommends screaming as a means of voice-culture; Quintilien Plutarque advjses gymnastic exercises for voice-culture; Codronchius (1597) prohibits certain fruits, vegetables, etc., to singers. The article is not long, but is full of interesting historical details and should be read *in toto*. Ed.

1111

"Singer's Nodule" (Chorditis Nodosa) Removed by Vocal Treatment. F. VICTOR LAURENT, *Jour. A. M. A.*, Sept. 30, 1911.

Etiologically the prime factors are considered to be "overtension of the intrinsic and extrinsic muscles of the larynx, which causes the stroke of the glottis." The site of the nodules, contrary to Kyle's expe-

rience, Lawrence finds usually to be near the junction of the middle and posterior thirds of the cords. The explanation is that when the upper register is attempted in a proper manner, "the posterior thirds of the cords are closely approximated and not in use, and the larynx rises to a higher position, the extrinsic muscles being relaxed. Now, when the pitch of the voice is raised and the larynx is held in the same position as when speaking or singing in the chest or medium register, there is overtension of the extrinsic muscles and the arytenoideus muscles, which causes the cords to vibrate throughout their entire length, and as the posterior thirds are closely approximated, the super-attrition which causes the nodes to develop occurs just a little anterior to this point." In the method of treatment emphasis is given to teaching the patient to use the voice and respiratory apparatus properly.

The patient cited as an illustration had been using the chest register, but a high pitched voice to talk to a deaf relative. Almost complete aphonia resulted. On examining the cords during tone-production, I found that when singing the four tones C, B, A and G below the staff, the node did not come in contact with the opposite cord. Taking the patient to the piano, I then instructed her how to speak on these four tones and instructed her how to breathe properly. She was told not to talk at all until she could do so by using only these tones as fundamentals, and, in the meantime, to practice the breathing exercises half a dozen times a day. External massage of the larynx was also practiced. For the hypertrophic laryngitis, inhalations of comp. tinct. of benzoin and paregoric, together with topical applications three times a week of 2% silver nitrate. In four weeks her voice was normal, though lower pitched than formerly, and in three months the nodule had disappeared.

EDGAR (GOLDSTEIN.)

1116

Some Obstructions to Speech Development. G. HUDSON-MAKUEN.

Original contribution to THE LARYNGOSCOPE, p. 993, Oct., 1911.

1117

Tone-gymnastics of the Vocal Cords with the Electric Tuning-fork. E. N. MALJUTIN, *Arch. f. Laryngol. u. Rhinol.*, Bd. 24, Heft 3, p. 345, 1911.

Since 1896 the author has indorsed the treating of functional disorders of the vocal cords by active and passive gymnastic exercise of the larynx by means of the vibrations of a siren. Recent experiments have shown that the good results are not due to this mode of exercise but to the mechanical action of the apparatus which directly transmits its vibrations to the cords. The author cites several cases of aphonia, successfully treated.

Ed.

1121

Rare Defects in Speech. F. NEUMANN, *Wch. klin. Wchnschr.*, Aug. 24, 1911.

Neumann describes three cases of sigmatism which differ from the usual forms of such speech disturbances; the first two resulted from bad habits, the third was due to an infantile pseudo-bulbar paralysis.

Ed.

1123**Disturbances in Speech Due to Teeth and Gum Anomalies. PASCH.**

Deut. Zahnärztl. Wchnschr., No. 24, 1911.

Malformations in the teeth and maxilla result in mispronunciation of the S-, F-, and W- sounds. Pasch discusses rhinolalia aperta in cleft-palate and other defects of the soft palate, as well as the obturator-therapy and the proper exercises for remedying these speech-disturbances.

Ed.

1130**Address on Aphasia. R. SAUNDBY, *Brit. Med. Jour.*, March 18, 1911.**

Saundby states that recent experiments (Marie) have proved that destruction of the third frontal convolution even on both sides does not result in aphasia nor that in aphasia there is any apparent lesion in this convolution. Of course, Broca's followers assert that the lesion is functional, but since not even microscopic examination reveals the slightest change, Saundby concludes that the supposed relation is dubious. Ed.

1133**Cause and Treatment of Defective Mutation of the Voice. E. B. SCRIP-
TURE, *Jour. A. M. A.*, p. 40, Feb., 1911.**

The change of voice at puberty sometimes goes on improperly, leaving the young man with a high, falsetto tone instead of the regular tenor or bass.

Examination shows the vocal chords excessively shiny and white, and, in phonation very tightly stretched. External examination shows that in speaking, or singing, the larynx is pulled high up under the tongue and often rather forward towards the chin. The excessive contraction is only found during singing and speaking. It is purely a nervous habit.

Treatment begins by teaching the person to sing on very low tones. At first the tones will be harsh and rattling, but they will gradually become natural. The pitch of the song is gradually raised until the patient sings over the normal range of voice. Another exercise consists of chanting sentences on a single low tone, which is gradually raised in pitch in successive exercises. A third exercise consists in singing the first word or two of a sentence on a low tone and finishing it by speaking. In a fourth line of work, exercises in singing and speaking are used while the patient presses the larynx down and backward by putting his fingers on the hyoid bone and on the notch at the front of the thyroid cartilage. The cure is often completed in one or two weeks. Ed.

1140**Eye-movement and Speech Teaching. A. J. STORY, *Volta Rev.*, p. 159,
June, 1911.**

In this short paper Story points out the necessity of training children to follow objects with their eyes without turning their head. The development of their eye-muscles is a preliminary requirement to accurate speech reading.

Ed.

1143

Influence of Sound-perception on Speech. V. URBANTSCHITSCH, *Arch. f. d. ges. Physiol.*, Bd 137, p. 422, 1911.

The effect of motor reflexes on the auditory nerve is well-known. To ascertain the actual effect of sound upon speech, Urbantschitsch had a patient read, while the harmonica, tuning-fork or Barany "Laermapparat" was applied to her ear. She was instructed to pay as little attention as possible to these sounds. The purpose of the experiment was not revealed to her. In the ten patients examined, speech-disturbances such as stuttering, difficult, slow or entire loss of power of speech were apparent. Simultaneously a feeling of oppression was noticed in the chest, larynx, base of tongue, palate, etc., or drawing pains in neck; also chills, facial pallor, and disturbances in the memory and power of perception were noted. The reflex symptoms varied with the kind and pitch of the sound.

Ed.

1144

Stuttering, Its Origin and Treatment. N. J. P. VAN BAGGENS, *Med. Rec.*, Sept. 2, 1911.

Van Baggens' first step in the treatment of stuttering is to give the patient a rest, forbidding him to speak. Exercises are instituted to develop the breathing, vocal and articulation muscles and indirectly influence the nerve fibers associated to the muscles. When a quiet, regular muscle-movement is established stuttering becomes impossible. After a few days the patient is allowed to speak a little; gradually the length of the discourses is increased. Even after the cure is completed the patient should remain for some time under the care of the specialist.

Both the symptoms of the disease and the temperament of the patient should be considered in treating the stutierer. The timid child should be approached with kindness, the spoiled, undisciplined child should be handled firmly. Much depends upon the good understanding between patient and specialist.

Ed.

1151

Laryngeal Paralysis in Beginning Tabes. E. BAUMGARTEN, *Orvosi Hetilap*, No. 26, 1911.

In the case reported by the author the vocal cords remained close to the medial line, upon respiration.

Ed.

1155

Dental Plate Two Months in Larynx. BOBONE, *Boll. delle Mal. dell'Orecchio della Gola e del Naso*, p. 49, March, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 208, March, 1912.

1157

Fixation of Tube in the Larynx. A. BONAIN, *Presse med. Belge*, May 17, 1911.

Bonain indorses the method of Polverini and Isonni which consists of holding the tube in place by a silk thread introduced through the thyro-

hyoid membrane with a curved needle passed out through the larynx. The thread is tied to the tube, one end is brought out through the mouth while the other, projecting from the neck is fastened around a roll of gauze. Ed.

1161

Two Cases of Pre-laryngeal Abscess of Similar Origin. C. J. BRETON, *Rev. ibero-am. de Cien-med.*, Jan., 1911.

Both cases were the result of the aspiration of grains of corn. In one case the abscess was situated on the upper portion of the crico-thyroid membrane; in the second case on the upper thyro-hyoid membrane. Ed.

1162

Papilloma of the Larynx in Children. A. BROCA and E. ROLAND, *Rev. de Chir.*, March, 1911.

The author feels that this condition is so grave that there is no effective treatment. If dyspnea be present tracheotomy may be required. After this operation there is a slight possibility of the growths shriveling. Occasionally thyrotomy or thyrostomy is advantageous. Sometimes stricture of the larynx compels laryngostomy. Broca and Roland have found removal of the growths through the mouth under direct visual inspection to be the preferable method. Of course, this operation cannot usually be performed before the age of 4 years and must be repeated several times. In children the prognosis is far graver because the lumen is smaller and children are more liable to warty growths. Ed.

1163

A Case of Spindle-cell Sarcoma of the Larynx. J. PRICE-BROWN, *Can. Pract. and Rev.*, Dec., 1911.

The author records a case of spindle-celled sarcoma of the larynx in a young man, aged 23 years. When first seen the patient was suffering from pain dysphagia and difficult respiration. A dark red growth filled the upper part of the larynx almost completely and was fixed by a broad base to the left arytenoid and ventricular region. The pathologist's report on a section of the growth was "positive spindle-celled sarcoma."

For three weeks the growth was treated by direct application of the electro-cautery and at the end of this time the bulk of the growth was removed and the right vocal cord was visible. Radium was then applied on every alternate day for over a week, 12 milligrammes intralaryngeally and 10 externally over the enlarged glands. The result was an enormous increase in the growth so that the larynx was again filled. The radium was discontinued and cauterization resumed, with the result that, after being unable to work for four months, the patient returned to his regular occupation, the larynx was clear, the glandular enlargement was gone and the patient's weight had increased from 124 to 140 pounds. After five months' steady employment he is still able to continue his work; but the sarcoma has not ceased developing and the ultimate result is doubtful. WISHART.

1165

Case of Recurrent Bilateral Paralysis of the Larynx. M. CARBONE, *Arch. ital. di Laringol.*, p. 149, Oct., 1911.

The laryngological diagnosis was as follows: Bilateral recurrent paralysis of the upper larynx, especially marked on the left, following a posterior crico-arytenoid paralysis and reflex irritation of the bulbar-centers. Radioscopic and clinical examination revealed that the etiology of the laryngeal affection was a peri-tracheo-bronchial adenopathy and consequent anterior mediastinal pleurisy. Ed.

1166

Cartilaginous Tumors of the Larynx. J. J. CARROLL, *Ann. of Otol., Rhinol. and Laryngol.*, p. 807, Dec., 1911.

Alexander published in 1900 an exhaustive treatise on this subject in which he cited twenty-six cases. Carroll, in the present paper, collects ten cases published since 1900. In age the cases ranged from 28 to 62 years, the average being 43 years. Nine out of ten were in men. The tumors are characterized by the following points: (1) Hardness in consistency; (2) red or rose color and covered with normal mucous membrane, and smooth in contour; (3) their origin is most often in the cricoid, less frequently in thyroid and arytenoid; (4) absence of cervical gland enlargement; (5) slow growth. When the tumors are small there may be no clinical symptoms; but later there is alteration in tone of the voice, then hoarseness, and at last aphonia. Synchronously, there is interference with breathing, and there may be painful deglutition. The prognosis is good and recurrences after operation are rather infrequent. Treatment at present is surgical; if small by the endo-laryngeal route, but if large by the external route. The authors recommend that the term enchondroma retain the meaning given it by Virchow and should not be applied to growths of the larynx, which are either chondroma, echondroma, echondrosis, or mixed tumor. EDGAR (GOLDSTEIN.)

1168

Unusual Case of Papilloma of the Larynx. W. W. CARTER.

Original contribution to *THE LARYNGOSCOPE*, p. 102, Feb., 1911.

1169

Laryngeal Stenosis and Salvarsan. CASATI, *Gaz. degli Osped.*, p. 688, May, 1911.

The laryngeal stenosis was so pronounced and serious in this case that tracheotomy was contemplated. Casati administered two injections of salvarsan after which the asphyxial attacks disappeared. Ed.

1170

Diagnosis and Treatment of Primary Laryngeal and Pharyngeal Edema.

CASTANEDA, *Rev. espan. de Laringol.*, No. 4, 1911.

The author distinguishes between an infectious and an angio-neurotic form. He disproves of the use of adrenalin since it is followed by a dilatation of the vessels and recommends instead that the network of connective tissue be torn by scarification or by removing a portion. In this way the collected exudate can drain off. Ed.

1171

Leech in Larynx. CHASSIN, *Soc. de Med. milit. franc.*, Jan. 5, 1911.

The only symptoms caused by the presence of the leech in the sub-glottic region were an uncomfortable feeling, and hoarseness. Removal was accomplished without difficulty. Ed.

1175

Paralysis of the Left Recurrent Nerve Following Mitral Stenosis. G.

COHEN, *Arch. f. Laryngol. u. Rhinol.*, Bd. 24, Heft 1, p. 35, 1911.

Both the clinical and the Roentgen findings point to the conclusion that here we have a case of recurrent paralysis due to mitral stenosis, a very rare etiological cause. Ed.

1177

Practical Results of the Bacteriological Examination of Croup. COLLET,

Rev. hebd. de Laryngol., p. 348, Sept. 16, 1911, and *Ann. des Mal. de l'Oreille, du Larynx, du Nez et du Pharynx*, p. FDE, No. 7, 1911.

The culture from the pharynx was but of relative value; laryngeal examination showed the false membranes in situ. Their direct bacteriological examination or that of the tube which had been in contact with them gave far more definite results. After the diagnosis is verified serotherapy is indicated, and it is wise to isolate these children. The author has observed twenty-six cases. Ed.

1179

Progress in Laryngology. A. COOLIDGE AND D. C. GREENE, *Boston Med. and Surg. Jour.*, p. 332, 1911.

Under different headings the writers take up the recent literature of interest. First Carter's operation for the transplantation of bone from the ninth rib in the correction of nasal deformities is described. Then the recent tendency to operate on the accessory sinuses by the intra-nasal route is dwelt upon. Most writers favor this method, wherever feasible. In regard to this route, when compared with the Killian operation for entering the frontal sinus, Halle is quoted as saying: "When the naso-frontal duct cannot be entered with a probe, intra-nasal operating should never be attempted."

Much has been written concerning the technic for the removal of the tonsils. Authorities agree that a tonsillotomy is inadequate and prefer the removal of the tonsil entire, with the capsule intact. Sluder, however, describes a new method whereby he enucleates the entire tonsil with his guillotine modified from the old Mackenzie instrument. The strength of this instrument is of prime importance, as considerable force is exerted. By engaging the aperture over the tonsil, and pulling the latter out of its soft bed and bringing its base against the alveolar eminence of the mandible, the tonsil is pushed well into the aperture and readily removed. Sluder finds that any tonsil may be enucleated by this method without preliminary dissection. On the other hand, while American writers are advising complete enucleation excepting where a simple hypertrophy without disease can be demonstrated (here a tonsillotomy is

advocated by some), European writers are entering the throes of discussion as to whether the entire organ should be removed. The enucleation method as adopted from us has gained an increasing number of champions and bids fair to become as firmly established there as it now is here.

"Direct laryngoscopy" is next discussed. As proving its great value the greater degree of safety and the better results obtained by the use of this method in the removal of papillomata from the larynges of children is pointed out. "It may be said that when a general anesthetic is indicated, the direct method is the proper route to the larynx." In adults, this more satisfactory method of examination may be frequently done under cocaine. "It makes possible direct intubation. In short it gives us a control over the larynx which we never had before."

The use of hexamethylenamin in laryngology has many warm advocates, but data are not as yet complete enough to permit of accurate conclusions or to prove its usefulness. "Miller uses it in 15-gr. doses four times a day in the treatment of common colds and is enthusiastic over the results." Others use the drug in accessory sinus infections, in middle-ear complications, and as preliminary treatment in operative cases.

The article closes with a description of Lewy's technic for the injection of alcohol into the internal branch of the superior laryngeal nerve, (0.5 to 2. ccm. of 75% alcohol is injected at a sitting), 1% cocaine may be added. The point of injection is about half way between the upper border of the thyroid cartilage and the hyoid bone, and about a centimeter in front of (mesially from) the superior cornu of the hyoid bone. This is a comparatively sensitive point. Insertion is made at this point directly in to a depth of 1 to 1.5 cm., and if the insertion has been accurately made, there will be a pain characteristically radiating toward the ear. Lewy used this technic in extreme cases of tuberculosis of the larynx. He reports relief from the pain with no loss of cough reflexes or aspiration of food, which could be taken with comfort following the injection.

BERRY (MOSHER.)

1180

Case Report of Extirpation of the Larynx. R. H. CRAIG, *Ann. of Otol., Rhinol. and Laryngol.*, Sept., 1911.

A male patient, aged 65, was referred to the laryngologic clinic of the Montreal General Hospital in June, 1907. He complained of a gradually increasing huskiness of voice, first noticed in March. Examination showed fixation of right half of larynx with considerable thickening of the right vocal cord, the arytenoid and interarytenoid region. There was also a superficial ulceration of right vocal cord. Microscopical examination of the tissue showed chronic inflammation. Antisyphilitic treatment for one month, then radium for three months was applied, with no apparent benefit. Patient left, returning to Western Hospital June 10 of the next year. There was now complete immobility and infiltration of the right side and almost complete involvement of the left side. Decided relief from a low tracheotomy un-

der cocain led the patient to urge a radical operation, which was done on August 2, after Gluck's method. Pathological examination showed epithelioma. The patient recovered and is able to make himself understood. To sum up recommendations as to treatment: "In an early case where the disease is limited to one side, one could employ diathermy as described. If the glottis is much involved, a preliminary tracheotomy and thyrotomy is indicated and treatment carried out through the incision. If no improvement is observed in four to six weeks, a radical operation is unavoidable."

EDGAR (GOLDSTEIN.)

1181

Erysipelas of the Larynx. D. B. DELAVAN.

Original contribution to THE LARYNGOSCOPE, p. 155, March, 1911.

1183

Acute Laryngeal Stenosis; Tracheotomy. R. DE SANTALO, *Rev. de Sanidad Militar*, July, 1911.

A soldier presented himself with such severe dyspnea that a tracheotomy was performed even before laryngeal examination. Hemorrhage was so severe that the operative field was secluded and the trachea had to be incised under the guidance of the finger. The bleeding was finally checked, the cannula inserted and respiration regulated. Examination revealed infiltration of the arytenoids and sub-glottic region, of tubercular origin. De Santalo states that this condition is also found in laryngeal stenoses of syphilitic origin.

ED.

1185

Tumors of the Larynx. J. F. ERDMANN.

Original contribution to THE LARYNGOSCOPE, p. 1, Jan., 1911.

1187

Anatomical Explanation of the Paralysis of the Left Recurrent Laryngeal Nerve Found in Certain Cases of Mitral Stenosis. G. FETTEROLF and G. W. NORRIS, *Am. Jour. of Med. Sci.*, May, 1911.

An article of real scientific value, presenting the results of careful clinical and anatomical research, accompanied by a table of hitherto reported cases. The authors conclude that when compression is accountable for the recurrent paralysis, it must always be caused by the nerve being squeezed between the left pulmonary artery and the aorta, or aortic ligament. Anything which will dilate or force upward the left auricle or the left pulmonary artery would tend to cause the condition. The anatomic relations are such that direct pressure of any portion of a dilated left auricle upon the aortic arch is impossible. When the softness of all the involved structures is considered, and the fact that the nerve is normally flattened against the aorta and not rounded, it seems probable that its function is abolished not by actual destruction from pressure but from a neuritis.

PACKARD.

1188

Paralysis of the Recurrent Nerve in Tabes and Simultaneous Aorta-aneurysm. G. FINDER, *Arch. f. Laryngol. u. Rhinol.*, Bd. 24, Heft. 2, p. 312, 1911.

In all cases of unilateral paralysis of the recurrent nerve in tabes Finder suspects aorta-aneurysm as the etiologic factor. Only after a thorough examination with the X-rays have proved such findings negative does he diagnose the paralysis as due to tabes. Ed.

1190

Laryngitis Dolorosa. W. FREUDENTHAL, *Arch. internat. de Laryngol. d' Otol. et de Rhinol.*, p. 92, Jan., 1911.

Published in the *Annals of Otology*, September, 1910, and abstracted in THE LARYNGOSCOPE, p. 1089, November, 1910.

1191

Unusual Instances of Laryngeal Abscess. W. FREUDENTHAL.

Original contribution to THE LARYNGOSCOPE, p. 1083, Nov., 1911.

1192

Laryngeal Paralysis in Diseases of the Medulla Oblongata; The Law of Semon. BELA FREYSTADTL, *Arch. f. Laryngol.*, Bd. 25, Heft 1, p. 90, 1911; and *Orvosi Hetilap*, No. 28, 1911.

Abstracted in THE LARYNGOSCOPE, p. 147, Feb., 1912.

1193

Displacement of the Larynx in Tuberculosis. O. FRIED, *Muench. med. Wchnschr.*, July 25, 1911.

Case of phthisis involving right apex. Contraction of lung tissue pulled the larynx over to the sterno-cleido-mastoid muscle, but there were no anatomical changes either in the larynx or thyroid. Ed.

1196

Case of Chronic Progressive Bulbar Paralysis. R. H. GOOD.

Original contribution to THE LARYNGOSCOPE, p. 100, Feb., 1911.

1197

Diagnostic Importance of Paralysis of the Larynx. GRABOWER, *Berl. klin. Wchnschr.*, April, 1911.

Grabower points out the great importance of examination of the larynx because laryngeal paralysis is often symptomatic of other diseases which may thus be caught in their initial stages. The author attempts to demonstrate how the various causal diseases may be differentiated.

Ed.

1199

Behavior of Larynx in Paralysis Agitans. GRAEFFNER, *Berl. klin. Wchnschr.*, Sept. 18, 1911.

In 26.25 per cent of the cases of paralysis, Graeffner finds that the vocal cords or the entire larynx vibrate in the time of the general tremor; in

33.75 per cent they vibrate at a time different from that of the general tremor; in 40 per cent of the cases he found absence of real tremor of the cords.

Ed.

1200

Right-angle Displacement of Larynx Due to Aortic Aneurysm. GRAEFF-

NER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 419, 1911.

Butler, aged 54 years, complained since two years of dyspnea and piercing pains in the posterior sternum. Examination revealed classical signs of aortic aneurysm. The larynx was displaced to such an extent that the Adam's apple was greatly dislocated to the left while at its site one could feel the anterior surface of the right thyroid cartilage. Laryngoscopic examination showed the right vocal cord pushed forward, immobile, the left was entirely free. Nothing could be done for this laryngeal displacement, but just before death, when the blood-supply of the aneurysms decreased, the larynx returned to its normal position. Autopsy revealed dilatation of the arcus aortae with bulging especial in an antero-superior direction. The right vagus was very much displaced; no mediastinal growths found.

Ed.

1204

Prelaryngeal Abscess Following Eight Intubations in a Child of Two Years. A. HALIPRE, *Rev. med. de Normandie*, May 25, 1911.

Report of a case in a child of 2 years, who developed a laryngeal abscess as a result of eight intubations in sixteen days. The child was robust when it entered the hospital, suffering from croup. Intubation was immediately performed. The child ejected the tube several times and it had to be re-inserted to prevent asphyxiation. When it was finally definitely removed a pharyngeal tumefaction was discovered. The abscess was incised and drained. The seat of the abscess was at an eroded point in the mucosa due to the intubation. The author states that he does not wish to criticise intubation but merely report an unusual case.

Ed.

1205

Severe Tertiary Syphilis of the Larynx Treated with Arseno-benzol. G. HICQUET, *La Policlin.*, July, 1911.

Young girl of 23, since one year under treatment for syphilis, was referred to the author because of violent laryngeal symptoms—aphonia and dysphagia so severe that patient was almost asphyxiated. Hicquet diagnosed the case as one of infiltration of both arytenoid cartilages, which almost entirely occluded the glottis. Vocal cords, immobile, swollen and almost in entire adduction. Injection of "606" into the V. mediana basilica brought on such a violent asphyxiating attack that tracheotomy was necessary. After this, laryngeal trouble decreased in severity; after three days the cannula could be removed, and in eight days the wound had healed and the larynx was in a normal condition with the exception of a very slight hoarseness in the voice.

Ed.

1209

Prognosis in Contusions of the Larynx. S. HURWITZ, *Arch. f. Laryngol. u. Rhinol.*, Bd. 24, Heft 22, p. 199, 1911.

Hurwitz reports this case to refute Hoffmann's theory of the ever good prognosis in cases of laryngeal contusions. In this case fixation of both vocal cords resulted.
Ed.

1214

Neuralgia of the Larynx. H. KAHN, *Chicago Med. Recorder*, April, 1911, and *Jour. of Ophth. and Oto-Laryngol.*, p. 137, May, 1911.
Abstracted in *THE LARYNGOSCOPE*, p. 749, June, 1911.

1216

Large Lipoma of the Laryngo-pharynx; Removal Extra-orally Under Cocain. E. L. KENYON, *Jour. A. M. A.*, p. 1793, June 17, 1911.

The tumor gave no external evidence; only by depressing the tongue could it be seen situated on the posterior right lateral pharyngeal wall reaching to the soft palate. It was soft and fluctuating on pressure. The tumor was shelled out from its capsule by a vertical incision from the level of the tip of the uvula to about the tip of the epiglottis. Recovery was complete.
Ed.

1223

Difficulty of Diagnosing "Paralysis Nervi Recurrentis Rheumatica," and the Value of the X-ray in the Examination. OSWALD LEVINSTEIN, *Arch. f. Laryngol. u. Rhinol.*, Vol. 25, No. 1, p. 78, 1911.

H. R., 27 years old, entered the Kgl. Univ. Polikl., suffering from hoarseness; previous history good, present trouble attributed to draught caught during a trip, which was associated with painful swallowing; temporarily. The laryngeal examination showed no returns, right cord slightly relaxed; on phonation light tremor of right arytenoid is seen; left cord normal; sensibility intact; the normal pharynx and other negative signs pointed to a paralysis nervi recurrentis dextrae rheumatica. Treatment consisted of galvanism of the right vagus and voice-rest, which appeared to give tone to the cord and arytenoid, so that these approximated the median line 1 cm. more, the hoarseness improved likewise. In consequence of the slow improvement, however, a Roentgen picture of the thorax was taken which showed a spindle-shaped tumor near the sub-clavian artery, at its junction with the innominate (an aneurysmal dilatation of the subclavian). The writer holds, that all cases of apparent rheumatic paralysis should be skiagraphed, a negative result being the condition, *sine qua non*, for diagnosis of rheumatic paralysis.
KLEENE (STEIN).

1230

Power of Speech in Cut Throat. D. H. MEHTA, *Lancet*, Jan. 28, 1911.

In Mehta's case the larynx was cut through, just about the vocal cords. Nevertheless the man was able to speak, though, of course, indistinctly.
Ed.

1232

Laryngeal Stenosis Following Gun-shot Wound. MOURE, *Jour. med. de Bordeaux*, June 18, 1911.

Patient had received gunshot wound in anterior region of the inferior maxilla. Wide wound, severe respiratory disorders, tongue detached from floor of mouth. Tracheotomy. After several days, erysipelas of this region and cicatricial stenosis of the larynx, which prevented decannulation. Moure performed a laryngostomy, and progressive dilatation of the tube with caoutchouc. In a very short time decannulation and laryngo-plasty. Results were very good; the arytenoids remained mobile. Ed.

1233

Some Rare Forms of Cancer of the Larynx; Clinical Remarks on Thyrotomy. E. J. MOURE, *Rev. hebdomadaire de Laryngol., d'Otol. et de Rhinol.*, p. 369, Sept. 23, 1911.

In old people, very often, malignant tumors arising from the vocal cords have a comparatively slow growth, and then suddenly develop very quickly. During the early stages microscopic examination does not always reveal the malignant character of the growth, yet the only hope for cure lies in early, radical operation. The author himself has seen five cases; one he describes at length. In this latter case the tumor was removed but recurred. Total removal was refused and a new tracheotomy performed. After five years patient is still alive.

The author also discusses his recent contributions to thyrotomy. Ed.

1234

Ultero-membranous Laryngitis. E. J. MOURE, *Rev. hebdomadaire de Laryngol., d'Otol. et de Rhinol.*, p. 257, March 11, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 689, June, 1911.

1237

Malformations in the Larynx and Trachea with Report of a Case of Congenital Cleft of the Cords. OERTEL, *Ztschr. f. Laryngol., Rhinol. u. ihre Grenzgeb.*, p. 125, Bd. 4, Heft 2, 1911.

Oertel reviews the literature on malformations in the larynx and trachea and reports a case which he observed personally. A girl of 19 suffered since childhood from hoarseness. Laryngoscopic examination revealed a fine longitudinal fissure on both cords running parallel, 1-1½ mm. from the free margin. The anterior and posterior portion of the vocal cords was free. The fissure was ½ mm. at its widest portion, and 1 mm. at its greatest depth. Paralysis of internus also noticed. The author has not been able to find an analogous case in literature. Ed.

1240

Necrotic Inflammation of Larynx, Respiratory Tract and Esophagus in Scarlet Fever. E. OPIKOFE, *Arch. f. Laryngol. u. Rhinol.*, p. 145, Bd. 25, Heft 2, 1911.

Of 128 scarlet fever autopsies, Oppikofer found necrotic and ulcerous processes in the larynx, trachea and esophagus in sixty-six. In almost all

of these cases there was, simultaneously, scarlet-diphtheria in the throat. In sixty-two instances the larynx, in fourteen the trachea, in three the bronchi and in fifteen the esophagus were also involved. Tracheotomy was necessary in twelve cases. The necrotic processes were deeper than in pure diphtheria; three patients died of hemorrhage. These complications were more frequently observed in children and in severe septic cases, which adds to the difficulty of making a diagnosis *intra vitam*. It is hard to determine in how many patients, who recover from scarlet fever, these complications have been present. The instances of esophageal stricture following scarlatina point to the possibility. Ed.

1244

Wounds of the Larynx. G. PINAROLI, *Arch. ital. di Otol., Rinol. e-Laringol.*, p. 128, March, 1911.

The author discusses the several methods of treatment of wounds of the larynx. He concludes that in inferior tracheotomy cat-gut sutures should be taken through the cartilage, muscles and skin at the most distal end of the lesion. LASAGNA.

1249

Herpes of the Larynx and Pharynx, With Report of a Case. D. A. PRENDERGAST, *Cleveland Med. Jour.*, p. 1030, Dec., 1911.

Glass in 1906 found only twenty-three cases reported. A row of vesicles 2 mm. in width extended on the posterior wall of the pharynx down towards the larynx. A similar group of vesicles was seen on the laryngeal surface of the epiglottis, and in the arytenoid space. The eruption followed a definite nerve path. The neuralgic-like pain was very severe. The author classifies his case as herpes zoster. Treatment consisted of an alkaline gargle and the internal administration of salicylates. EDGAR (GOLDSTEIN.)

1250

Two Urgent Tracheotomies. ORTEGA, *Rev. espan. de Laringol.*, No. 5, 1911.

The first patient, who had a laryngeal tumor, fell suddenly, almost lifeless, to the floor. Tracheotomy was performed, but artificial means of restoring respiration had to be resorted to.

The second case was that of a child, 13 days old, who had swallowed formalin. Cyanosis. Urgent tracheotomy. Recovery. Ed.

Tracheal Sarcoma. PRZYGODA, *Medycyna*, No. 16, 1911.

Man, aged 29 years. Since five months the patient had been suffering from stenosis. By means of tracheoscopy, the tracheal stenosis was observed, five centimeters above the bifurcation. The patient died; autopsy and microscopic examination revealed adeno-sarcoma, springing from the tracheal wall. Ed.

1252

Tobacco Dyspnea. J. D. RECKITT, *Lancet*, June 3, 1911.

Reckitt states that tachycardia is a very frequent result of excessive use of tobacco. He also reports one case of severe dyspnea which was

found to be due to the use of an old pipe that had become saturated with nicotine. Since total abstinence from the use of tobacco was deemed impractical, Turkish cigarettes were substituted and potassium bicarbonate + tincture of nux vomica prescribed with good results. Ed.

1256

Case of Laryngostomy; Some Modifications in the Dressings. ROUBE, *Bull. de la Soc. med.-chir. de la Drome et de l'Ardèche*, Oct., 1911.

Case of typical subglottic laryngeal stenosis; tracheotomy; two months later laryngostomy (under general anesthesia) followed by severe hemorrhage, rupture of the sub-glottic adhesions, insertion of three sutures on each side; gauze-vaseline tampons; no temperature; caoutchouc dilatation after sloughing; hard rubber dilatation for one year; window cannula used for a year; cure. The author also describes a modification of Sargnon's technic which he employs. Ed.

1260

Case of Laryngitis Gummosa Treated with "606." N. SACK, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 1, 1911.

Report of a case of gummatous ulceration of the epiglottis, arytenoid folds and region of the arytenoid cartilage in a patient, aged 10 years. An intra-muscular injection of 0.2 of "606" was made. Within a month the laryngeal condition was entirely relieved and the patient gained rapidly in weight. Ed.

1262

Case of Glosso-laryngeal Hemiplegia. E. F. SANZ, *Arch. internat. de Laryngol., d'Otol. et de Rhinol.*, p. 469, March, 1911.

In connection with cancerous metastasis in the right carotid gland, atrophy and paralysis of the right half of the tongue and simultaneously total paralysis of the right vocal cord took place. Ed.

1265

The Surgical Treatment of Laryngo-tracheal Stenosis, with Special Reference to Translaryngeal Drainage Tube Fixation. E. SCHMIEGELOW, *Arch. f. Laryngol. u. Rhinol.*, vol. 25, No. 3, p. 512, 1911.

The writer performs a thyrotomy, removes the obstructing cicatricial web, and inserts the largest gutta-percha tube admissible, 5 cm. in length, which is fixed with silver wire carried through it and the thyroid on each side. The cutaneous wound is closed with metallic sutures. Gutta-percha tubes are preferred to metal or glass tubes, because they induce absorption of cicatricial tissue and favor healthy epidermization.

The advantages of this operation are: (1) The ease with which it is performed; (2) the little discomfort to the patient, who is freed from the tracheal cannula, and may attend to his work while the tube is *in situ*; (3) the extraordinary dilating effect, which may be three months or longer; (4) the slight danger this method involves. STEIN.

1270

Five Cases of Laryngostomy. SIEUR and ROUVILLOIS, *Ann. des Mal. de l'Oreille, du Larynx, du Nez et du Pharynx*, p. 925, No. 10, 1911.

Four of the cases of stenoses were consequent to typhoid fever, and one was caused by trauma. Dilatation should be performed very slowly, nor should the larynx be stretched beyond its normal capacity. The possibility of dispensing with a tube is dependent on the condition of the larynx. Ed.

1279

Notes on a Case of Epithelioma of the Larynx. W. T. WALLACE, *Can. Pract. and Review*, May, 1911.

The successful removal of a squamous-celled epithelioma of the left vocal cord, by excision of the same through a thyrotomy wound, in a man aged 46. The patient has since been able to take part in public affairs. It is to be noted that an elder brother of the patient died of carcinoma of the larynx. WISHART.

1280

Laryngo-esophageal Fistula; Laryngostomy; Cure. J. A. WHITE. Original contribution to *THE LARYNGOSCOPE*, p. 1151, Dec., 1911.

1283

Lateral Dislocation of Larynx and Trachea Subsequent to Struma Operation. WREDE, *Korresp.-Bl. des allg. aerztl. Ver. v. Thuringen*, No. 12, 1911.

Patient, woman of 59 years. Seven years previous the whole right lobe of the thyroid gland, together with a portion of the left was removed because of colloid struma. Uneventful recovery. At the present time recurrence of fist-sized struma in left lobe. Right lateral displacement of larynx and trachea. No alarming symptoms. Ed.

1288

Laryngitis Subchordalis Acuta. A. ZIMMERMANN, *Ztschr. f. Ohrenh. u. Krankh. d. Luftw.*, Bd. 63, Heft 1, p. 99, 1911.

Three cases are reported. The characteristic symptoms are: a more or less acute, inflammatory, visible, sometimes severe stenosis, and autochthonous swelling of the mucous membrane in the subchordal region, which seldom and only in long-standing cases spreads upward to the free borders of the vocal cords. In its downward direction, however, it often involves the trachea. The author discusses the etiology, course, prognosis differential diagnosis and patholo-anatomical findings. The author points out that in bronchoscopic examination, after the introduction of the bronchoscope the hitherto negligible dyspnea regularly became so alarming that tracheotomy had to be performed and urges that bronchoscopic examination should never be performed unless arrangements have been made to perform the tracheotomy, if necessary. Ed.

1289

Two Cases of Laryngo-esophageal Resection. ZIMMERMANN, *Muench. med. Wchnschr.*, Jan. 31, 1911.

Case 1. Patient, aged 50 years; esophageal carcinoma; protruding into trachea. Resection. Wound healed nicely, but patient died after five weeks from cachexia. Autopsy revealed extensive carcinoma of the liver; there was no recurrence, however, in the operated region.

Case 2. Laborer of 21 years; sarcoma of the thyroid gland, larynx and esophagus. Radical operation with uncomplicated healing. Three months later suffocation, due to ejection of cannula. Autopsy impossible. Because of these two experiences the author concludes that simultaneous resection of the esophagus and larynx does not present unusual difficulties. Preliminary gastrostomy is unnecessary. Just after the operation nourishment may be given through the esophageal fistula. Later Hacher's esophageal plastic may be performed. Ed.

1291

Bronchial Glands and the Thymus. E. C. AVIRAGNET, *Bull. de la Soc. de Ped.*, March, 1911.

Apropos of a wrongly diagnosed case in a child of 16 months, the author points out that often diseases of the tracheo-broncheal glands, which compress the nerves and cause spasmodic phenomena without direct compression of the air-tract are responsible for symptoms pointing to thymic hypertrophy. After broncho-pneumonia or whooping cough a stridor is likely to be a consequence; congenital stridor, however, is probably due to enlargement of the thymus. Ed.

1296

Isolated Subcutaneous Rupture of the Trachea. BEYER, *Deut. Ztschr. f. Chir.*, Vol. 110, Nos. 4-6, 1911.

Beyer reports a case of rupture resulting from contusion in a boy of 9 years. The trachea was opened, and a cannula introduced and left in for four days. The prompt and uncomplicated recovery in this case encourages the author to urge immediate operation for all such ruptures, since serious complications may develop. Ed.

1297

Case of Mediastinal Cyst Producing Compression of the Trachea, Ending Fatally in a Child of Nine Months. A. D. BLACKADER and D. J. EVANS, *Arch. of Ped.*, March, 1911.

German measles at 7 months was followed in the infant by bronchitis and a mild rachitis in costochondral articulations. During this time patient sometimes exhibited a peculiar croupy respirator and occasionally sudden dyspnea attacks with moist rales at base of both lungs. At beginning of ninth month symptoms became suddenly worse; respiration became rapid and showed an expiratory stridor; attacks lasted several minutes. Physical examination showed an area of dullness over the upper part of median line of chest and a tumor became palpable above sterno-clavicular joint. Death occurred after a few days of such attacks.

Post-mortem examination showed a 5 cm. by 3 cm. thymus attached to sternum by numerous adhesions reaching as low as fourth interspace. Behind thymus lay a rounded, yellowish cyst 4.75 cm. x 4.5 cm. x 3.5 cm. It lay between trachea and esophagus but mostly to the left. "No pedicle could be found, nor any connection with surrounding organs, which were normal. The unilocular cyst contained a clear viscid fluid. Histologically, wall of cyst contained muscular and fibrous tissue and was lined by a well-defined columnar ciliated epithelium. "The literature of mediastinal cysts is extremely scanty, and we have found none in the literature at our disposal which bears any close resemblance to the one we have described." The authors are of the opinion that its probable "origin was in a partial persistence of the original fistulous communication between the trachea and esophagus."

EDGAR (GOLDSTEIN).

1302

Case of Foreign Body in the Trachea. Status Lymphaticus. Death.

Autopsy. J. PAYSON CLARK, *Boston Med. and Surg. Jour.*, p. 715, 1911.

Clark reports a most interesting case of a boy, aged 16 months, who inhaled a hulled peanut kernel. The radiograph gave no aid nor did it reveal an enlarged thymus, as the cardiac area confused this and also the percussion sounds. The peanut was successfully removed from the trachea, by direct bronchoscopy, under a short ether anesthesia; but the patient became at once cyanosed and almost pulseless. A tracheotomy gave temporary relief. Before leaving the table he went into a convulsion from which he recovered, but he died twenty minutes later in another convulsion. Autopsy revealed a greatly enlarged thymus gland measuring 11.5 cm. in length, 6 cm. in width, and 2 cm. in thickness, at the greatest dimensions. Post-mortem findings were otherwise negative.

BERRY (MOSHER.)

1304

Case of Removal of Tin Tack from Bronchus. V. T. F. DAVIES, *Transvaal Med. Jour.*, p. 172, March, 1911.

V. T. F. DAVIES, *Transvaal Med. Jour.*, p. 172, March, 1911.

The aspirated tack was removed by lower bronchoscopy. The interesting features of this case are the use of a magnetically charged forceps, in the employment of the radiosopic screen as a guide, and in the fact that the author shows the right bronchus to be much more tolerant of foreign bodies than is the left.

Ed.

1306

Remarkable Case of Foreign Body in Left Bronchus. A. EPHRAIM, *Pasows Beitr.*, Bd. 5, Heft 4, p. 307, 1911.

Man of 53, who suffered from a slight bronchitis, felt, upon drinking bouillon in which there was small pieces of chicken, a sudden pain in his chest, followed by a coughing spell which lasted an hour. Pain and bloody exudate during a few days, then cough and severe rale. Several physicians denied a diagnosis of foreign body; Roentgen examination

also negative. Rale remained; symptoms of simple bronchitis. After two months bronchoscopic examination revealed foreign body in left main bronchus. Removal; the foreign body proved to be a piece of chicken-bone (16x12x8 mm.).

Ed.

1307

Experimental Study of the Question of Aspiration of Foreign Material Into the Air-passages During Intra-tracheal Insufflation. T. S.

GITHENS and S. J. MELTZER, *Jour. of Exper. Med.*, June, 1911.

From numerous experiments the authors conclude that intra-tracheal insufflation protects the respiratory tract very efficiently against invasion from the pharynx. The filling up of the pharynx with foreign matter, either from the stomach or mouth caused no harm to the trachea or bronchi, even in cases where the animal was under total anesthesia. If, however, a tube was placed in the larynx or trachea without the protection of an effective recurrent air-stream the entrance of foreign matter from the pharynx and trachea was greatly facilitated. Anesthesia greatly increases the danger of aspiration in these cases, for it removes the protective action of deglutition.

Ed.

1313

Broncho-esophageal Foreign Bodies. GUISEZ, *Soc. de Med. de Paris*, Feb., 1911.

Guisez reports on twenty-one foreign bodies which he removed by means of broncho-esophagoscopy, during the year 1910. Two especially interesting cases are the removal of a rabbit-bone from the bronchus of a 11 months-old child and that of an open pen-knife blade from the bronchus of a child of 4 years.

Ed.

1314

Some Instances of Tracheal and Bronchial Tumors. GUISEZ, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 449, Oct. 14, 1911.

Ten very interesting cases of primary tracheal and broncheal tumors were reported. Until the recent aids in direct examination of the parts, this condition was relatively rarely known. It is hardly possible to differentiate between the symptoms of malignant and benign tumors. In every case a diagnosis could not be made merely by laryngoscopic examination.

Ed.

1317

Case of Multiple Foreign Bodies in the Smaller Bronchi. F. E. HOPKINS, *Ann. of Otol. Rhinol. and Laryngol.*, p. 825, Dec., 1911.

A four-year-old girl while eating peanuts coughed and inspired some of the fragments. An X-ray examination and two bronchoscopic examinations of trachea and right and left bronchi proved negative. Patient died in two days, and autopsy revealed at least twenty-four fragments of peanuts scattered throughout the smaller bronchi. EDGAR (GOLDSTEIN.)

1319

Diverticulum of the Tracheo-bronchial Tree. KAHLER, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 1, p. 86, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 789, Oct., 1911.

1325

Demonstration of the Method of Using the Flexible Endo-bronchial Spraying Apparatus. E. VON TOVOELGI, *Orvosi Hetilap*, No. 18, 1911, and *Berl. klin. Wchnschr.*, May 22, 1911.

Von Tovoelgi demonstrates the use of Ephraim's well-known spray. He reports very satisfactory results, from this therapy, in cases of chronic bronchitis and trachitis. Ed.

1326

Pebble Aspirated and Arrested in the Right Bronchus at the First Bifurcation; Expelled and Lodged in the Glottis During Tracheotomy Preparatory to Bronchoscopy. A. MARTIN, *Rev. hebdomadaire de Laryngol.*, p. 161, Feb. 18, 1911, and *Rev. barcelonesa de Enferm. de Oido*, p. 84, June, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 691, June, 1911.

1327

Tubo-tracheotomy. MASIP, *Rev. de Cien. med. de Barcelona*, June, 1911.

Tubo-tracheotomy is a combination of intubation and tracheotomy. First intubation is performed by means of the cannula, which has an open groove-like wall on its anterior surface. Tracheotomy follows intubation and is easily performed, with the cannula as a guide. This method obviates many of the difficulties of tracheotomy; the operation can be performed without an assistant and there is no danger of making the median incision to one side. It is especially adapted to the use of the general practitioner, presupposing his familiarity with intubation.

GOLDSTEIN.

1329

Demonstration of a Specimen of Amyloid Trachea. LUPSCH, *Wrt. klin. Wchnschr.*, No. 14, 1911.

The specimen was obtained from a man who died of cardiac affection. Pronounced cartilaginous growth apparent, simultaneous with the presence of amyloid degeneration in the mucous glands. Ed.

1333

Intra-tracheal Insufflation. S. J. MELTZER, *Jour. A. M. A.*, p. 521, Aug. 12, 1911.

The essentials of the method are: (1) The introduction deep into the trachea of a flexible elastic tube, the diameter of which has to be much smaller than the lumen of the trachea; and (2) the driving through this tube of a nearly continuous stream of air, which returns through the space between the tube and the walls of the trachea. The continuous air-stream should be interrupted a second or two five or six times a minute to observe the degree of distention of the thorax and to regulate the same by exchanging the tube, if necessary, for a larger or a smaller one. By this means the "death space" represented by the mouth, pharynx, larynx and trachea is eliminated, and the return stream of air prevents insufflation of foreign material. The use of the

method, tested by many experiments and on human beings, is urged (1) cases where the normal mechanism of respiration fails; (2) as a method of giving anaesthesia, especially ether. Its safety is vouched for.

EDGAR (GOLDSTEIN.)

1335

Upper and Lower Bronchoscopy. J. J. CASSIDY, *Can. Jour. of Med. and Surg.*, Dec., 1911.

The author gives an account of the history and the methods employed in bronchoscopy with a report of two cases, X-ray pictures of which clearly show the foreign bodies in the bronchi.

In the one case a lad of 17 years had inhaled a tack. By means of the X-ray it was located in the right bronchus. Chloroform was administered and the tack promptly removed by forceps through the bronchoscope.

The second case was one of a boy 11 years of age, supposed to have swallowed a tie-pin. The pin not having been recovered at the end of a week, an X-ray picture was taken. It showed the pin, globular head downward in the left bronchus, its point penetrating the wall of the trachea. It was removed by lower tracheoscopy and bronchoscopy, under chloroform.

WISHART.

1339

Diagnosis of Foreign Bodies in Air Passages and Esophagus. F. REINKING, *Deut. med. Wchnschr.*, Nov. 30, 1911.

Reinking reports three cases in which the presence of foreign bodies was at once detected by visual inspection, though previous examination had failed to find it, and urges that more use be made of bronchoscopy and esophagoscopy in preference to percussion, auscultation and roentgenoscopy. One patient complained of incessant cough, which was discovered to be due to foreign body. The author also refers to Leyden's two cases, the one in a patient who succumbed, supposedly, to phthisis, but in whom at autopsy these reactions were found to have been due to a scrap of bone in the lung. The other patient had a gangrenous putrid process continuing for years. Finally, he coughed up a shirt stud.

Ed.

1341

D'Espine's Sign in Tracheo-bronchial Adenopathy in the Adult. ROCH, *Semaine med.*, Feb. 22, 1911, and *Prog. med.*, April, 1911.

Roch says this sign consists in an exaggerated resonance and bronchophonic quality of the voice when auscultation is done over the vertebral column, especially of the whispered voice; it has hitherto been of service only in diseases of children, but Roch states that it is a precious diagnostic sign in the mediastinal adenopathies of adults, and is destined to be of especial value in diagnosing malignant disease of these glands, now a very difficult matter. If auscultation is direct, close the free ear; have the patient whisper "ninety-nine"; one must differentiate induration of the apex and also cavities, which give a similar sound; also pleurisy with effusion.—*Ex.*

1345

Actinomycosis of the Bronchi. POSSELT, *Med. Klinik*, Sept. 3, 1911.

The apex of the lungs is occasionally the primary seat of the infection, but more often the bronchi are involved. An early diagnosis is essential for effective treatment. Posselt feels that the disease is far more prevalent than is usually supposed. It can be accurately diagnosed by repeated examinations of the naso-pharynx and of the sputum.

ED.

1347

Inhalation of Superheated Air in Bronchitis and Related Affections. A.

SCHMIDT, *Therapie d. Gegenw.*, Jan., 1911.

Abstracted in THE LARYNGOSCOPE, p. 797, July, 1911.

1348

Foreign Body in Left Bronchus; Extraction by Bronchoscopy. D.

HERMANO SEGUI, *Rev. de Enf. de la Garganta, Nariz y Oídos*,

April, 1911.

A child, 3 years old, while playing with some corn swallowed a grain on January 12, violent coughing and dyspnea was followed by an apparent period of calm. Her family physician doubted the existence of any foreign body until the last days of February when a constant fever and abundant expectoration made it necessary to call a specialist. The child was sent to the Mercedes Hospital on March 7, and on examination presented fever 39.4° C., intense dyspnea and a general emphysema of the upper half of the body. Tracheotomy was immediately performed. Radioscopy revealed nothing in the thorax, but auscultation made it evident that air could not enter the lower left lobe of the lung. Three days after a narrow tube of Bruening's bronchoscope was passed through the tracheal wound and at the bifurcation a large amount of pus and mucus blocked the tube and drawing it out to clean it a grain of corn came out at the end of the tube. The patient recovered slowly, the tracheal wound closed and for some time she had an abundant expectoration.

MARTINEZ.

1349

Casuistics of Primary Carcinoma of the Trachea. ERNST SIMMEL, *Arch. f. Laryngol. u. Rhinol.*, Bd. 24, Heft 3, 1911.

Following an obduction on the body of a man 77 years old, in whom carcinoma of the esophagus was diagnosed, a primary carcinoma simplex, involving an area extending from the first to the tenth tracheal ring was found, over which the mucous membrane of the esophagus was freely movable. The author mentions the frequency of esophageal carcinoma, the early appearance of hoarseness and prominent dyspnea; furthermore the rapid, fatal ending, not from increase of growth, but due to aspiration of gangrenous secretion into the lungs, also of pathological interest on account of its seat, directly beneath the cricoid, instead of at the bifurcation as usually found.

STEIN.

1352

Percussion of the Spine in Diagnosis of Compression of the Trachea. G. STRADIOTTI, *Policlin.* (July med. sec.) No. 7, 1911.

Stradiotti describes in detail a case in which certain modifications in percussion were explained by the presence of a tumor in the anterior mediastinum. This tumor compressed the trachea and caused a resonance when the corresponding vertebrae was percussed. Ed.

1354

Tack Lodged in Left Bronchus. G. TAPIA, *Rev. espan. de Laringol.*, Jan., 1911.

Reviewed in THE LARYNGOSCOPE, p. 1024, Oct., 1911.

1356

Direct Bronchoscopy; Value of This Method for Detection and Removal of Foreign Bodies. H. TILLEY, *Lancet*, April 22, 1911.

Tilley reports two cases, one in which he removed, by this method, a splinter of rabbit-bone impacted for three years, and the other in which a mutton-bone which had been impacted for ten days was got out. If general anesthesia be used, the patient should be placed in the lateral position. Glasses should be worn by the operator to protect him against septic matter which the patient may cough up, and against the stinging feeling due to exhaled chloroform. Ed.

1358

Case of Laceration of the Trachea. W. L. WALLACE AND H. O. BRUST, *Buffalo Med. Jour.*, Oct., 1911.

Patient fell in gymnasium, and struck the front of his neck against the back of a chair. Immediate dyspnea, dysphagia, much blood coughed up. Patient could not lie down; if he fell asleep his breathing ceased immediately. Operation. Three or four rings of trachea found badly broken; proximal and distal ends of broken trachea entirely separated, out of line, and held together only by the fibrous membrane, connecting posterior extremities of cartilaginous hoops. Protruding splinters of rings cut away; tracheal wound sewed with chronic catgut; tracheal tube made air-tight by stitching piece of fascia over the opening. However, when the tenacula were removed, the trachea collapsed for want of supporting cartilage hoops. Several traction linen sutures were passed into the front of the trachea and brought forward out of wound, keeping up the tension; the superficial wound was closed and the sutures fastened around the dressing covering the wound; small rubber drainage tube left for five days at lower extremity for infiltrated tissue, then removed. After a week traction stitches also removed and wound allowed to close. After a month normal respiration and speech. Ed.

1360

Collapse of the Trachea While Performing Thyroidectomy. T. C. WITHERSPOON, *South. Med. Jour.*, April, 1911.

Witherspoon reports two instances occurring within the last fourteen months of collapse of the trachea during a thyroidectomy for ex-

ophthalmic goiter, the causes of which are anatomic defect in the rings posteriorly, and the nearness of the recurrent laryngeal nerve to the thyroid gland. To avoid pressure on the trachea the author recommends para-sterno-cleido-mastoid incision, which enables the operator to raise the gland out of its bed without this pressure. For thyroidectomy under local anesthesia the author recommends the paramuscular rather than the collar incision. Ed.

1365

Isolated Tracheal Fracture. M. ZIMMERMANN, *Arch. f. Laryngol. u. Rhinol.*, p. 466, Bd. 24, Heft 3, 1911.

Zimmermann reports his own case, and tabulates also all the thus far observed cases of isolated tracheal fracture—in all there are forty instances recorded. Ed.

1366

Tumors of the Esophagus and Benign Tumors in Particular. ABRAND, *Monde med.*, Feb. 5, 1911.

Apropos of a case of myxoma of the lower esophagus accompanied by spasms apparently due to a malignant tumor the author points out three great advantages of esophagoscopy. He also discusses the various dimensions of the normal esophagus and points out the fact that retro-pharyngeal tumors may arrest the operation. After discussing some aspects of malignant growths the author again returns to neoplasms and the means of relieving them. The author closes with a review of the important cases of benign esophageal tumors (twenty) reported in literature. Ed.

1367

Stenosis of the Lower End of the Esophagus. H. L. AKIN, *West. Med. Rev.*, Feb., 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 879, Aug., 1911.

1370

Case of Esophago-malacia. Bocca, *Le Larynx*, June, 1911.

In a fatal case of cerebro-spinal meningitis in which the diagnosis had been confirmed bacteriologically, malacia was found in the esophagus, and about 3 cm. of the lower portion perforated. The author states that this was a case of ulcer pepticum of the analogous processes of the stomach attacking the mucous membrane. Cantieri designates these cases as "esophago-malacia." Ed.

1372

Removal of Foreign Bodies from the Esophagus and Bronchus. C. F. BOWEN, *Ohio State Med. Jour.*, July, 1911.

Before any attempt is made to remove the foreign body Bowen recommends that a radiograph be made. This is of especial value in cases of sharp bodies. Even if the foreign body be dense to the rays much data can thus be attained by observing the changes in the surrounding parts. The location of vegetable foreign bodies in the esophagus is ascertain-

able by giving the patient bismuth and watching its passage with the aid of the fluoroscope, the foreign body will hinder its route. Bowen has carefully removed foreign bodies in thirteen cases which include safety-pin, tacks, needles, pins, tin whistles, etc. His preferable method is to remove the body, with an ordinary forceps passed into the esophagus or bronchus through a tracheotomy wound, using the fluoroscopic screens as a guide.

Ed.

1373

Esophagotomy Externa for Foreign Body. A. BROCA, *Soc. de Chir.*, May 24, 1911.

Irregular stone (1 cm. x 2 cm. x 3 cm.)—was swallowed by a child, 27 months old. The foreign body could not be pushed into the stomach. External esophagotomy was performed with great success.

Ed.

1375

Congenital Web of the Esophagus; Report of a Case. J. P. CLARK.
Original contribution to *THE LARYNGOSCOPE*, p. 810, July, 1911.

1381

Removal of Foreign Bodies from the Esophagus by Means of the X-rays.
M. D'HALLUIN, *Jour. des Sci. med. de Lille*, April 1, 1911.

D'Halluin first discusses the two possible diagnostic methods—esophagoscopy and radioscopy. The first of these he feels is the more disagreeable to the patient while by means of the second a less annoying and quite as harmless and positive a diagnosis can be made. In most of the cases the author thinks removal can be accomplished under guidance of the radioscopy screen as soon as a diagnosis has been made. In the two cases reported money was removed under general chloroform anesthesia, by means of x-rays, in two children of 4 and 8 years respectively.

Ed.

1382

Dental Plate Lodged in Esophagus; Esophagoscopy Removal. DOMENECH.
Rev. Barcel. de Enferm. de Oido, Sept. 30, 1911.

The patient was a woman, aged 41 years. The dental plate swallowed was triangular and measured 35 mm. on one side. It was successfully removed by esophagoscopy.

Ed.

1383

Pulmonary Gangrene Due to Perforations of Traction Diverticulum into Esophagus. H. DUCHEZ, *These de Paris*, 1911.

Duchez discusses that form of primary pulmonary gangrene due to anthracosis or tuberculosis of the bronchial ganglions. The differential diagnosis and surgical treatment are discussed.

Ed.

1386

Röntgen-ray Examination of Cicatricial Stenosis of the Esophagus in Children. H. FLESCH and I. PETERI, *Jahrb. f. Kinderh.*, June, 1911, and *Orvosi Hetilap*, Nos. 5-7, 1911.

The authors draw attention to the frequency of this condition—at the Stefanie hospital in Budapest. During the last nine years 516 cases

have occurred in which there were acute disturbances and 267 cases of cicatricial stenosis of the esophagus. The condition was examined by means of the Roentgen rays. The children were given soft porridge containing thirty to forty per cent of oxid of zirconium, and as this was swallowed its passages was carefully watched by means of the Roentgen rays. Thus multiple stenoses were detected. This method can be applied during the first weeks before a sound can be introduced. Ed.

1387

Maltese Cross Fixed in the Esophagus G. FOURNIER, *Rev. hebdomadaire de Laryngologie, d'Otol. et de Rhinol.*, p. 321, March 25, 1911.

Patient, child aged 6, aspirated a maltese cross. The following day no pain was apparent upon swallowing. A week later radioscopy revealed the cross in the hypo-pharynx. Esophagoscopy removal was attempted but abandoned. The cross was finally removed with the Kir-misson hook. Ed.

1388

Radioscopic Diagnosis and Study of Esophageal Stenosis. FRIMAUDEAU. *These de Bordeaux*, 1911, and *These de Paris*, 1911.

Frimaudeau concludes that radioscopy is a method applicable to all cases of stenoses. It presents no contra-indications, is not wearing on the patient, is rapid, permits the phenomenon to be seen by several observers, enables one to localize stenoses and to study their forms and aspects. But it is deficient in that it does not furnish information of the nature of these stenoses; esophagoscopy alone permits us to obtain a specimen of the tumor for examination. The two methods should supplement each other. Radioscopy, the painless method, should be employed first and if this be insufficient esophagoscopy should be resorted to. Ed.

1393

What Esophageal Spasms Really Are. GUISEZ, *Presse. Med.*, March 18, 1911.

Guisez objects to the broad application of the word "spasm." Irritation of the mucous membrane due to the initial contraction may cause the spasm to develop into a contracture and then into a cicatricial stenosis through degeneration of the mucosa. The causes are insufficiently insalivated food, excessive emotion and fatigue treatment is by bougie-dilatation. Ed.

1399

Suppurative Peri-esophagitis After Removal of Foreign Body. JACQUES, *Rev. hebdomadaire de Laryngologie*, p. 609, Nov. 18, 1911, and *Ann. des Mal. de l'Oreille*, p. 940, No. 10, 1911.

Apropos of the case of a man who swallowed a sharp bone, which remained in the esophagus for thirty-six hours without producing phlegmonous peri-esophagitis, Jacques states that it is necessary to explore the esophagus very carefully in cases where the foreign body is supposed to be a sharp bone and that, even after the foreign body is removed, the

prognosis should be reserved and the patient carefully watched for a week, and arrangements made for intubation if any alarming symptoms develop—dysphagia, stubborn cough scapular pains or signs of general infection. Ed.

1404

Diverticulum in the Esophagus. A. T. JURASZ, *Beitr. z. klin. Chir.*, Jan., 1911.

Case of pharyngo-esophageal diverticulum resulting from pressure from within on a defect in the muscular coat. From experience with this case and from a study of recorded cases Jurasz feels the radical operation can be relied upon to effect a cure but that gastrostomy should be performed preliminary to this procedure. Ed.

1406

Two Coins Removed from the Esophagus of a Child of Three Years. K. LANG, *Orvosi Hetilap*, No. 7, 1911.

These two ten heller pieces adhered firmly together and lay for ten days between the second and third dorsal vertebrae. They were removed under anesthesia. Ed.

1415

Idiopathic Enlargement of the Esophagus. S. MINTZ, *Arch. f. Verdauungskr.*, Aug., 1911.

Mintz states that in nearly all cases of idiopathic esophageal dilatation, there is primary or secondary cardiac stricture and that the esophageal symptoms disappear when the stricture is relieved. The author then reviews the various methods of treatment. To obtain temporary relief the dilated esophagus may be rinsed repeatedly. Ed.

1417

Folds and Webs at the Upper End of the Esophagus. H. P. MOSHER.
Original contribution to THE LARYNGOSCOPE, p. 1089, Nov., 1911.

1419

Report of Three Cases of Removal of Coins from the Esophagus of Infants by a Simple Procedure. H. L. MYERS, *Ann. of Otol. Rhinol. and Laryngol.*, p. 460, June, 1911.

The first case was one in which an infant of 18 months had swallowed a coin which lodged in the lower esophagus. It was removed by means of a flexible esophageal bougie with an olive-shaped end. The other two children were 10 months old. By means of a conical urethral bougie a coin was removed from the esophagus of each. The author prefers esophagoscopy but points out that in certain cases his above-mentioned method is of advantage because of its simplicity. Ed.

1421

Tooth-plate Impacted in the Esophagus and Pharynx; Esophagostomy.
L. E. C. NOBURY, *Lancet*, July 8, 1911.

In two cases the plate was lodged tightly in the upper part of the esophagus, in such a manner that esophagoscopical removal was considered more unsafe than esophagostomy. In a third case a large plate was implanted in the pharynx, while a sharp portion was hooked into the epiglottis. Removal through the mouth was easily accomplished. In all three cases recovery was complete, though in the first it was complicated by secondary hemorrhage. The author discusses in detail the indications for, and the post-operative treatment and complications of cervical esophagotomy.

GUTHRIE.

1422

Case of Severe Spasm of the Upper Extremity of the Esophagus Due to Hysteria. J. OLLER, *Bol. de Laringol. Otol. y. Rinol.*, p. 1, Jan., 1911.

Pronounced stenosis. The esophagoscope could only be passed, with difficulty, through the esophageal mouth. The patient was, however, so much unnerved that the procedure was abandoned. Nevertheless, the result of this attempt was to make it possible for the patient to swallow solid food.

Ed.

1424

Technic of the Examination of Esophageal Lesions. H. S. PLUMMER, *Jour. A. M. A.*, Feb. 25, 1911.

Success depends largely on the care and facility in instrumentation. Discussion of X-ray in connection with gum arabic suspension of bismuth, the use of a silk thread bougie, and esophagoscopy.

EDGAR (GOLDSTEIN.)

1427

Foreign Bodies in the Esophagus in Children. W. E. SAVAGE, *Lancet-Clinic*, Jan. 21, 1911.

Case of safety-pin in the esophagus. By means of esophagoscope the needle was brought up to the sterno-clavicular joint and removed with a pharyngeal cannula.

Ed.

1434

Case of Esophagismus. T. M. TIBBETTS, *Practitioner*, Aug., 1911.

Patient, aged 59, complained of pains in knees and shoulders; presented urticarial rash scattered over body, and especially abundant on face, arms and chest; cough; temperature 100° F. Patient kept in bed, and milk diet and salicylates prescribed. On the night of the third day there were frequent violent retching efforts, accompanied by a profuse flow of saliva, intense pain under lower part of sternum; swallowing impossible. Poultices were applied to chest, steam inhalations administered, and bismuth and soda prescribed. After a few hours saliva flow and dysphagia subsided. These attacks occurred at intervals of about twelve hours. Fifteen years before the patient had had a simi-

lar, though less severe, attack. Hypodermic injections of morphine were given, which usually relieved symptoms. After about two weeks Tibbetts attempted an injection of atropin (1-100 gr.). The salivation and spasm abated at once. The injection was repeated in four hours and then atropin was administered, orally, in small doses, every four hours. Within a day the rash vanished and in the course of a month the patient had recovered.

Ed.

1440

Asthma and Anaphylaxis. J. H. BARACH, *N. Y. Med. Jour.*, Jan. 21, 1911.

Barach could not demonstrate the presence of anaphylactin in the blood of his patients. His investigations as to the anaphylactic origin of asthma are negative.

Ed.

1441

The Pre-asthmatic Period. R. BEAL, *Gaz. des Hop.*, May 4, 1911.

Beal defines the pre-asthmatic period as the one which just precedes the crisis. As symptoms he designates a sneezing spell which produces a coryza; a nasal hydropnea which precedes or accompanies this sneezing or exists independently, and which resists all treatment; and epiphora. The patient has a sensation of cold in the eyes; also at times that of nasal obstruction without there really being one, and of an extreme sensibility to odors and to dust.

Ed.

1442

Asthma in Children. J. COMBY, *Arch. de Med. des Enf.*, p. 721, Oct., 1911.

The author draws his conclusions from an experience with seventy-five cases in children. He feels that adenoids or nasal catarrh are never the etiological factors nor that the disease can be influenced by operation for these. This neurotic condition is often accompanied by catarrhal bronchitis or violent sneezing spells. The first attack is often puzzling and may be mistaken for pneumonia, thymic compression, etc., though the transient syndrome easily contradicts these diagnoses. The child often outgrows the disease though the arthritic tendency persists. The diathesis is most effectively combatted by an out-of-door life, rubbing the skin, baths, douches and vegetable diet. The author often administers sodium arsenate (1.2 or 3 mg.) daily for ten days each month then sodium or potassium iodid (0.1 gm.) for ten days, especially in catarrhal forms.

Ed.

1443

Constipation as a Factor in Asthma. W. ERSTEIN, *Deut. med. Wchnschr.*, Oct. 19, 1911.

Erstein has found that asthma subsided in several instances after chronic constipation was cured. One case is reported in which the symptoms did not recur for nine years and when they did they were accompanied by dyspepsia and constipation. When gastro-intestinal functioning was restored the asthma again disappeared.

Ed.

1445

Asthma and Tuberculosis. H. Z. GIFFEN, *Am. Jour. of Med. Sci.*, Dec., 1911.

The author recalls the fact that by many of the older writers, it was held that asthma and tuberculosis were antagonistic conditions, never occurring in the same individual. He has carefully gone over the available literature upon the subject, and concluded that they certainly do exist in many cases. In this article he reports three instances of simultaneous occurrence. In the diagnosis of asthma, it is essential to examine the sputum carefully; to avail oneself of the Roentgen rays, especially if fibroid phthisis or early tuberculosis is suspected, and if the sputum is as so often in those cases negative, to appreciate that the examination of an asthmatic imposes on the physician the exclusion of phthisis.

PACKARD.

1452

Resection of Nerve for Nasal Asthma. NEUMAYER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 303, 1911.
Abstracted in THE LARYNGOSCOPE, p. 293, March, 1911.

1455

Question-blank to Collect Data in Regard to Asthma Patients. PESCATORE, *Med. Klinik.*, June 18, 1911.

Pescatore has formulated the following twenty-five questions that should be asked of patients suffering from asthma: (1) Is the dyspnea constant, or is it paroxysmal? (2) If paroxysmal, are you completely free from respiratory trouble in the intervals? (3) Does the dyspnea appear only on bodily exertion, or does it come on when you are quiet? (4) Have you noticed a certain regularity in regard to the time of year and the hour of the day? (5) Can you tell when and where an attack will occur? (6) Describe an attack as accurately as possible with all the symptoms. (7) Do you suffer otherwise from cough, spitting, night sweats, or fever? (8) Do you sometimes cough up blood? How often, how much, bright, dark, or frothy? (9) Have you a family history of lung disease? (10) Have you heart disease? If so, how does it show itself? (11) How long have you suffered from asthma? (12) How frequent were the attacks at first? (13) How often are they now, in the day or night, and how long do they last? (14) To what do you trace the first attack? (15) To what do you trace attacks now? When to cold how is this shown? (16) Are you sensitive to certain foods, odors, weathers, or regions? (17) Do you suffer, or have you suffered from any of the following diseases: (a) Eruptions, such as eczema, herpes, urticaria, or prurigo; (b) scrofula; (c) migraine; (d) coryza, sneezing, catarrh of the eyes; (e) hay asthma; (f) congestion, sweating, easy blushing, unexplainable swellings; (g) gout or rheumatism; (h) intestinal catarrh; (i) polypos or proliferations requiring operations in the throat or nose? (18) Is there any family history, from grandparents to children, or among near relatives, of attacks of asthma, or of any of the enumerated diseases? (19) Are you nervous? How is this shown? (20) How is your appetite and digestion?

(21) How do you feel generally? (22) Is your condition worse, or do you weigh less than formerly? (23) What treatment have you received and with what result? (24) Have you become accustomed to a remedy that you can no longer do without? If so, what is it? (25) What other statements do you wish to make regarding former diseases, or anything else that may seem worthy of notice to you?—*Et.*

1459

Thymic Death and Thymic Asthma in Children. D. SSOKOLOW, *Arch. f. Kinderh.*, Vol. 57, Nos. 1-3, 1911.

Ssokolow draws his conclusions from an analysis of 101 cases, and warns against a too general diagnosis of death due to enlarged thymus when other causes may be present. He states that experiments have proved that the thymus must be very much hypertrophied to compress the larynx sufficiently to produce dyspnea, especially in children; for their chest walls and surrounding tissue is very elastic. Ssokolow feels that the danger from enlarged thymus lies, rather, in the increased internal secretion which floods the organism, or in the toxic effect produced. Though rare, there are cases of thymic asthma. The author feels that proper thymic secretion is very necessary for the growing child, though other organs can partially assume this function. Ed.

1464

Broncho-esophagscopy and Mediastinal Tumors. CABOCHE, *Jour. des Prac.*, Feb. 27, 1911.

The case reported illustrates the diagnostic value of this method. The symptoms were dyspnea and constriction, pronounced decrease in the respiratory sound on the left side, and at times slight dysphagia. By means of broncho-esophagscopy a mediastinal tumor was discovered which penetrated into both esophagus and trachea. Ed.

1465

Two Cases of Laryngo-esophageal Resection. ZIMMERMANN, *Muench. med. Wchnschr.*, Jan. 31, 1911.

Case 1. Patient, aged 50 years; esophageal carcinoma, protruding into trachea. Resection. Wound healed nicely, but patient died after five weeks from cachexia. Autopsy revealed extensive carcinoma of the liver; there was no recurrence, however, in the operated region.

Case 2. Laborer of 21 years; sarcoma of the thyroid gland, larynx and esophagus. Radical operation with uncomplicated healing. Three months later suffocation, due to ejection of cannula. Autopsy impossible. Because of these two experiences the author concludes that simultaneous resection of the esophagus and larynx does not present unusual difficulties. Preliminary gastrostomy is unnecessary. Just after the operation nourishment may be given through the esophageal fistula. Later Hacher's esophageal plastic may be performed. Ed.

1471

Esophagoscopically Diagnosed Traction Diverticulum of the Esophagus.FRESE, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, No. 11, p. 1303, 1911.

Girl of 19 attempted suicide. Symptoms, collapse, repeated, severe vomiting of discolored blood, thirst, no emphysema, no sign of cardiac or pulmonary trauma. The abdomen was swollen and sensitive to the touch. Roentgen-examination disclosed a projectile in the left thorax at the eighth rib; laparotomy. Stomach swollen with air and water; atony. Diagnosis: Trauma due to transverse, gun-shot wound of esophagus.

Ed.

1473

Bronchoscopy. E. GALLUSSER, *Corres.-Bl. f. Schweizer Aerzte*, p. 1217, Dec. 10, 1911.

Gallusser reports two stubborn cases of asthma which were cured by spraying the bronchi directly with a mixture of novocain and epinephrin. Previously, Ephraim had reported on the beneficial effect of a single spraying by this method in thirty-seven of fifty-eight cases of chronic bronchitis or asthma; in twelve other cases the medication had to be repeated. Turpentine, (thirty per cent) was at times used for local application.

Ed.

1474

Three Recent Cases of Bronchoscopy for Foreign Bodies.

D. CROSBY

GREENE, *Boston Med. and Surg. Jour.*, p. 117, 1911.

Three cases are reported; one of a dried fig which could not be reached and caused a fatal pulmonary abscess; one of a pin which was successfully removed by a specially adapted instrument; and the third, a bronchoscopy in a suspected foreign body case which proved to be an acute inflammatory process. In this last the author notes that the bronchoscopy gave no untoward effects.

BERRY (MOSHER.)

1476

Esophagoscopy in Diagnosis and Treatment of Cicatricial Stenosis.G. GUISEZ, *Bull. de la Soc. de Ped.*, June, 1911.

Twenty-one of Guisez' fifty-four patients were children. The stenosis is usually due to caustics. In only ten of all of the cases was it necessary to resort to gastrostomy. The most stubborn stenoses can usually be cured by esophagoscopy. The author introduces a narrow bougie with the esophagoscope, leaving the bougie in place for several hours. Then larger sounds are introduced and thus the lumen is stretched. In a child esophagoscopy is comparatively easy owing to the fact that the mouth of the esophagus is open and gapes rhythmically with inspiration.

Ed.

1477

Recent Cases of Foreign Bodies in Esophagus and Tracheo-bronchus and Endoscopic Therapy of Their Complications.GUISEZ, *Ann. des Mal. de l'Oreille, du Larynx du Nez et du Pharynx*, p. 293, No. 4, 1911.

Since May, 1909, to date of paper, Guisez has removed twenty-four foreign bodies from the esophagus and nine from the trachea and bronchi.

Guisez reports on these cases and draws conclusions. Guisez had no ill-effects due to the endoscopies, though in some of the cases there was severe dyspnea present. Neither general debility nor age are contra-indications; in some cases of sepsis the operation was successfully performed, and the age of his patients varied from 11 months to 81 years. However, the one fatal case recorded was performed in the presence of sepsis (removal of a pig's bone by lower bronchoscopy).

In young children, even though the symptoms point to the presence of the foreign body in the bronchi or trachea the foreign body usually lodges in the esophagus. The case of a child is reported in whom tracheotomy was performed because of such a diagnosis. A few days later the body was expelled per rectum. Under usual conditions Guisez advises removal of the foreign body by superior bronchoscopy resorting only to tracheotomy when the foreign body is too large or too sharp to pass the glottis, or in children under 2 years. Guisez discusses the various cannulae, instruments and technics.

Ed.

1483

Esophagoscope and Gastroscopy. C. JACKSON.

Original contribution to THE LARYNGOSCOPE, p. 923, Sept., 1911.

1484

Laryngeal, Bronchial and Esophageal Endoscopy. C. JACKSON.

Special editorial department, THE LARYNGOSCOPE, p. 25, Jan., 1911, and p. 1183, Dec., 1911.

1486

Esophagoscopy. R. H. JOHNSTON.

Original contribution to THE LARYNGOSCOPE, p. 1156, Dec., 1911.

1488

Bronchoscopy and Esophagoscopy. Indications and Contra-indications.

KAHLER.

Original contribution to THE LARYNGOSCOPE, p. 898, Sept., 1911.

1489

Bronchoscopy in Young Children. G. KILLIAN, *Deut. med. Wchnschr.*, June 29, 1911.

In this paper Killian reviews nineteen cases in which the dyspnea increased after the removal of the foreign body and intubation or tracheotomy became necessary. The explanation of this is that the subglottic passage is much narrower than it is usually thought to be in a child of 8 months its diameter is at most 3.5 mm.; in one of 2 years, diameter 6.5 mm.; at 3 years, 7 mm.; at 7 years, 8 mm.; at 10 years, 9.5 mm.; and the foreign body, forced back and forth by the breath, sets up an irritation. In these nineteen cases the tube used for bronchoscopy was too large in diameter. Pronounced swelling in the subglottic region showed contra-indicate upper bronchoscopy; it is also contra-indicated if the foreign body be a bean or similar substance, for these swell so rapidly and greatly that they cannot be removed through the larynx.

Ed.

1490

History of Bronchoscopy and Esophagoscopy. G. KILLIAN.

Original contribution to *THE LARYNGOSCOPE*, p. 891, Sept., 1911.

1493

Foreign Body—Dental Plate—Removed from Esophagus by Esophagoscopy. J. LABOURE, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 193, Feb. 25, 1911.

Patient was a man of 56 years, who, while asleep, aspirated a dental plate, which passed into the pharynx and was removed on the following day under chloroform and cocaine, by means of esophagoscopy. In this case Roentgen-examination for the foreign body gave negative findings.

Ed.

1495

The Esophagoscope in Removing Sharp Foreign Bodies from the Esophagus. WILLIAM LERCHE, *Jour. A. M. A.*, p. 634, March 4, 1911.

In this article Lerche urges that all foreign bodies in the esophagus, especially sharp ones, should be removed as promptly as possible. In these latter, perforation of the esophageal wall, followed by mediastinitis, perforation of the aorta, cervical abscess, or perforation into the bronchus or trachea, followed by death, is so likely to occur that it is imperative to remove these foreign bodies as expeditiously, and at the same time, as skillfully as possible. The bougie and probang should not be employed, nor should the esophagoscope with obturator be used, but the esophagoscope should be carefully introduced under the guidance of the eye and the esophageal tract carefully examined as the instrument progresses downward; great care being observed lest the instrument push the foreign body through the esophageal wall. Esophagotomy should not be done until the esophagoscope has first been used, both to locate the foreign body, and extraction attempted through it. Should failure follow esophagoscopy, then esophagotomy may be employed, but not until then, except in the case where perforation of the wall into the cervical tissue, with abscess, has already taken place. If a mediastinal abscess has taken place, following perforation of the thoracic esophagus, the esophagoscope should be used to locate the site of perforation to determine on which side the mediastinum should be opened. Lerche reports five cases of his own illustrating successful removal by esophagoscopy. Four of these cases were in adults and consisted, in two of them, of pieces of bone, two of fish bone, and one a garter safety pin in a two-year-old child. He illustrates an instrument, a snare, devised by himself, for the closure and removal of open safety pins in the esophagus. He shows by the statistics of Balacescu and Kohn, covering 326 cases, that cervical esophagotomy had a mortality of about 27 per cent prior to 1890, and of 17.8 per cent between 1890-1900, (antiseptic era), and of 12.6 per cent in the aseptic era (1900-1903), and of 17.5 per cent in forty cases collected later by Neumann. Lerche collected from the literature since 1900, 200 cases of foreign bodies in the esophagus, of which number twenty-five, or 12.5 per cent,

were fatal; twenty-three cases, or 11.5 per cent, being due to perforation of the esophagus. The remaining two deaths were due to perforation of the abdominal viscera. In eighteen there was perforation of the abdominal or pelvic viscera. The seat of esophageal perforation was: Upper thoracic part, fifteen cases; cervical part, five cases; lower thoracic, one case; not mentioned, two cases. The aorta was perforated in twelve of these cases, the common carotid in one. Splinters of bone were the most frequent causes of these twenty-three deaths—producing ten of them—others being pins and needles, four; coin, three; fish bone, two; tooth plate, two; iron washer, one; brooch, one. Of these 200 cases, the commonest foreign bodies were in the order of their frequency: Tooth plate, piece of bone, coin, pins and needles (including all kinds) open safety pin, fish bone, metal whistle, button, piece of wood. The location was mentioned in 118 cases, being in the cervical part fifty-eight times, upper thoracic thirty-three, and lower thoracic twenty-seven times. Of the forty-one tooth plates, nine were passed by rectum, thirteen removed by esophagotomy, eleven by esophagoscopy, five by gastrotomy, three not mentioned. In several cases the tooth plate remained some months before attempt at removal. In one case, eighteen months; another, eleven months. The longest period a foreign body remained in the esophagus before successful removal was four years. The youngest case operated by esophagoscopy was four days (a rubber nipple).

Of this series, 104 cases were operated as follows: Esophagoscopy, 47 cases; esophagotomy, 27; esophagotomy and gastrotomy, 2; esophagotomy and esophagoscopy, 1; gastrotomy, 10; coin catcher, 12; probang, 5.

There were no deaths among the forty-seven cases in which the foreign body was extracted by esophagoscopy excepting in one case, in which previous attempts at extraction had been made with the coin catcher, causing rupture of the esophagus, followed by mediastinitis and death.

Lerche concludes his paper as follows:

- (1) Esophagoscopy is not a difficult procedure, and it gives the best results in the treatment in these cases, with the least discomfort to the patient.
- (2) The use of instruments in the esophagus, except through the esophagoscope, in case of sharp foreign body, should be abandoned.
- (3) In every case in which the swallowed foreign body is not recovered, an esophagoscopy examination of the esophagus should be made.
- (4) Even if the foreign body is successfully pushed into the stomach, the patient is not entirely beyond danger.

HALSTED.

1496

Removal of an Open Safety-pin from the Trachea by Upper Bronchoscopy. G. HUDSON-MAKVEN, *Jour. A. M. A.*, p. 286, July 22, 1911.

Abstracted in THE LARYNGOSCOPE, p. 897, Sept., 1911.

1497

Further Bronchoscopic Experiences. E. MAYER AND S. YANKAUER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 395, 1911.

Abstracted in THE LARYNGOSCOPE, p. 233, March, 1911.

1498

Three Unusual Bronchoscopic Cases. E. MAYER, *JOINT. A. M. A.*, p. 392. July 29, 1911.

The writer presents for the first case, one of tumor in the bronchus in a child, aged 3. From the loud expiratory effort and examination of the chest, the diagnosis of an obstruction in the bronchus was made. This was substantiated with the bronchoscope and a benign tumor removed with complete restoration to normal breathing and to perfect health. An unusual feature of the case was the marked cyanosis while holding the epiglottis for the introduction of the inner tube. This was obviated by the use of a long tube which had an attachment for throwing ether vapor into the tube during the whole manipulation.

The second case was that of a girl with a most violent barking cough, due to a tracheal constriction. A cure resulted from a single introduction of a bronchoscopic tube forcibly breaking through the constriction.

The third case was that of a tracheal scleroma in which frequent introductions of the bronchoscopic tubes kept the trachea patent and avoided impending tracheotomy.

While the method in the last case may be considered only palliative, the patient has now been under observation for four years, has a bronchoscopic tube inserted once every two months, she continues her daily avocation, and is surely in far better condition than if tracheotomy had been performed.

A. A

1501

Use of the Esophagoscope in Esophageal Surgery. HARRIS PEYTON MOSHER, *Boston Med. and Surg. Jour.*, p. 401, Sept. 14, 1911.

In this article, the writer points out clearly the important part the esophagoscope will play in the future in the diagnosis and treatment of esophageal diseases. "Figuratively and literally, the dark ages of esophageal surgery, owing to this instrument, have passed."

The three possible dangers in the use of this instrument are: "Rupture of an aneurism, perforation of the esophagus and sloughing of the esophagus from pressure of the tube." The first two should be easily avoided by following the axiomatic rule never to advance the tube unless one sees open esophagus ahead. The third danger is as easily averted by the careful use of a small enough tube.

New growths, pouches, spasm of the cardia, foreign bodies and corrosive strictures, may all be discovered and treated under direct examination with the least injury to the patient. The author discusses each of these conditions in detail. He adds that for the removal of foreign bodies lodged just below the cricoid (so frequent a locality in children), the open speculum has proved of great service in his hands.

In closing he reports the cure of a case of corrosive stricture of the esophagus with complete closure for three inches, which startlingly demonstrates the utility of the esophogoscope even where all other surgical methods had been tried and had proved ineffective. BERRY (MOSHER.)

1505

Direct Broncho-esophagoscopy for Removal of Foreign Bodies. E. SCHMIEGELOW, *Hospitalstidende*, Jan. 4, 1911.

The nine cases reported include two instances of removal of foreign bodies (beans) from the lungs, one (bone) from the trachea, and six (beans, bones, button, etc.,) from the esophagus. In each case under direct visual inspection it was possible to remove the foreign body quickly and safely.

Ed.

1507

Two Unusual Cases of Intra-bronchial Foreign Bodies. SARGNON, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 464, Sept., 1911.

Sargnon recommends the treatment of esophageal strictures by means of a negative electric current, by which the surrounding regions also receive part of the electric treatment. This therapy insures gradual dilation and prevents retraction.

Ed.

1511

Bronchoscopy for Foreign Bodies with Remarks on the Recognition of Bronchial Asthma. H. v. SCHROETTER, *Wr. med. Wchnschr.*, No. 25, 1911.

Several cases are reported: A child of 19 months aspirated a lentil, which was removed two weeks later, endoscopically, from the right bronchus, without anesthesia. In another case a piece of bone became lodged in the left bronchus, in a woman 32 years old, and was coughed out after four weeks. One man, aged 31 years, aspirated a dental-plate into his left bronchus. This plate was located with difficulty. The author also reports a case to illustrate the advantages of endoscopic application of medication in bronchial asthma.

Ed.

1520

Laryngeal Hemostasis by Means of Clamp Sutures. F. BLUMENFELD, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 389, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1030, Nov., 1911.

1521

Operative Treatment of Dysphagia with Laryngeal Tuberculosis. A. BLUMENTHAL, *Berl. klin. Wchnschr.*, Sept. 4, 1911.

Blumenthal relieved dysphagia in two cases of laryngeal tuberculosis—one in a man of 36, and one in a woman of 33 years—by resecting the superior laryngeal nerve. The author describes the technic. The by-effects were only slight and transient.

Ed.

1525

Total Laryngectomy in Two Stages Under Local Anesthesia. R. BOTY, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 820, May, 1911.

After a detailed description of his technic the author arrives at the following conclusions: Total laryngectomy, under local anesthesia, in

two stages greatly simplifies the very serious operation; the energies of the patient are not exhausted to such an extensive degree, and the intervals elapsing between the stages can be regulated according to the vitality of the patient. Ed.

1528

Treatment of Stridulous Laryngitis. H. BOURGEOIS, *Prog. med.*, May 6, 1911.

Bourgeois considers the following phases: The precautions required to prevent the breaking of the crises; their treatment; and general preventative measures. The author recommends remedies to be used both as prophylactic measures and during the acute stages. Ed.

1529

Autoscopic Treatment of Laryngeal Tuberculosis by Means of X-rays. BRUENINGS, *Ztschr. f. Ohrenh. u. Krankh. d. Luftw.*, Bd. 62, Heft 4, p. 324, 1911.

Bruenings details the four possible forms of technic, the operative, percutaneous, endo-laryngeal and autoscopic treatment with x-rays. The operative (the use of the rays after laryngo-fissures) is hardly applicable in the human. The percutaneous is not satisfactory because to be effective, rays of too great intensity are necessary and there is the danger of cutaneous injury. The endo-laryngeal is not satisfactory in that the rays introduced through a tube inserted through the pharynx fail either to have the effect or cause injury by burning some of the area above. Therefore, only autoscopic treatment is of avail. The author states that the reason why so few cures have resulted from this method is only because the technic is still faulty. Ed.

1531

Treatment of Stuttering and Stammering and Voice Defects Through the Science and Art of Speech and Singing. B. CADWALLADER, *Cleveland Med. Jour.*, p. 1025, Dec., 1911.

Cadwallader classifies all difficulties with consonants under the head of stammering. Stuttering, he says, embraces all trouble with vowels or words beginning with vowels and is eliminated through perfect control of the stroke of the glottis. Lalophobia he defines as fear of stuttering and lack of confidence in oneself.—*Ex.*

1532

Laryngostomy for Scleroma of the Larynx. A. CANEPELE, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 2, p. 157, 1911.

Abstracted in THE LARYNGOSCOPE, p. 1163, Dec., 1911.

1533

Calcined Magnesia for Laryngeal Papilloma. R. CLAOUE, *Ann. des Mal. de l'Oreille, du Larynx, du Nez et du Pharynx*, p. 646, No. 7, 1911.

In the two cases reported by Claoue, tracheotomy, thyrotomy or laryngostomy were impractical. He removed the growths by the direct route under chloroform anesthesia but within a month there was complete re-

currence. Feeling that the papillomata are histologically similar to the ordinary warts of childhood he submitted each of his patients to a calcined magnesia treatment. To one he administered daily doses of eighty grains of the drug for periods of two weeks, followed by a two weeks' rest. Then eight-grain dose were given daily for four months. To the second patient regular doses of eight grains were given for five months. In both cases the recovery was complete. ED.

1536

Progress in Treatment of Laryngeal Carcinoma Since the Organization of the American Laryngological Association. J. S. COHEN.

Original contribution to THE LARYNGOSCOPE, p. 807, July, 1911.

1538

Anesthesia by the Intra-tracheal Insufflation of Air and Ether. CHARLES A. ELSBERG, *Ann. of Surg.*, Feb., 1911.

In this article Dr. Elsberg describes the technic which he employs in his method of anesthesia, the article being illustrated with plates of the apparatus and diagrams. It is necessary that the description be read in full in order to comprehend it. The employment of the apparatus is extremely easy after its installation, the anesthetist having nothing to do but watch the pressure-gauge and interrupt the current of air at the necessary time. It possesses the advantage of allowing the anesthetist to be sitting out of the way of the operator and his assistants. Dr. Elsberg finds that the best intra-tracheal tube is silk-woven catheter, having an opening at or near its end, and at least 30 cm. long. It should have two marks upon it, one 12 cm. from the tip, and the other 26 cm. from the tip. The size of the catheter must, of course, vary according to the diameter of the trachea and the size of the larynx. These points can be ascertained by direct laryngoscopy before the introduction of the tube. The tube should be introduced into the trachea by means of the Jackson direct laryngoscope. Primarily to anesthetization, the patient should be given a dose of morphine and atropine, and anesthetization started in the usual manner with ether. When the patient is well under ether, he is placed on the operating table with the head hanging well downward, and the mouth held open by an ordinary mouth-gag. The direct laryngoscope is then introduced and after the size of the glottis is ascertained, the catheter is introduced through it into the larynx. The tube is now held in place and the laryngoscope withdrawn. The author has devised a special gag or bit to hold the tube in place. Elsberg has found his method particularly useful in operations of the head and neck as the anesthetist is never in the way of the operator or his assistants. PACKARD.

1539

Further Experience with Anesthesia by the Intra-tracheal Insufflation of Air and Ether. CHAS. A. ELSBERG, *Ann. of Surg.*, June, 1911.

It is always advisable to anesthetize the patient in the ordinary way by inhalation before the intra-tracheal tube is introduced; also to give the patient a hypodermic of morphine to diminish the reflex irritability

of the larynx. The author states that when ether is administered by intra-tracheal insufflation to dogs it is impossible to kill them by the anesthetic. In human beings he has never observed dilatation of the pupils or any other evidence of too deep anesthesia. The author has anesthetized about 100 persons by his method and has never witnessed an outward symptom during or after anesthesia. Vomiting is very rare after intra-tracheal insufflation and never occurs during it. The method is of particular value in intrathoracic operations and in operations on the neck, such as thyroidectomy. The author thinks it would be of great service in laryngectomy, although he has had no opportunity to practice it as yet. In operations upon the tongue and mouth, and on the jaws, it should be most useful, and also in operations in which the patient has to be placed in the prone position, such as laminectomy.

PACKARD.

1540

Experiences in Thoracic Surgery Under Anesthesia by Endo-tracheal Insufflation of Air and Ether. C. A. ELSBERG, *Ann. of Surg.*, Dec., 1911.

Elsberg points out as advantages of this method: (1) The ease with which patient can be kept under the effects of the anesthesia; (2) Absence of vomiting and other complicating after-effects; (3) the impossibility of giving an overdose. This procedure has been employed in over 200 patients at the Mount Sinai Hospital, in New York. Ed.

1542

Endo-bronchial Spray for Chronic Bronchitis. A. EPHRAIM, *Deut. med. Wchnschr.*, Nov. 9, 1911.

Ephraim has applied medication directly to the bronchi in 161 cases, and thinks that this method has a promising future especially in treatment of asthma. He introduces the nozzle of the spray under control of the bronchoscope or, after anesthetizing the glottis and trachea, introduces the flexible spray tube with the aid of a cannula. The spray has to be under considerable pressure; no general sedatives are required. He has used various drugs and mentions particularly the benefit in chronic bronchitis of addition of a little iodine or weak solution of silver nitrate. He declares that the method is entirely harmless and of decided efficacy in many cases not amenable to any other measures. In his experiments on animals, the endo-bronchial spray penetrated into the alveoles, but he remarks that the air passages were normal in the animals. The great absorbent power of the bronchial mucosa suggests the possibility of a powerful action by diffusion into the adjoining parts of the lung.—Ex.

1545

Method of Removing Laryngeal Polypi. G. FERRERI, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 1, July, 1911.

Ferreri recommends an instrument he has devised and describes his method of scraping out the papillomata, by means of iodoform gauze passed through the larynx and out the tracheotomy wound. Ed.

1548

Endo-bronchial Treatment of Asthma. W. FREUDENTHAL, *N. Y. Med. Jour.*, June 24, 1911.

1549

Practical Experiences in the Treatment of Speech Defects. E. FROESCHELS and G. SIMON, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, p. 73, No. 8, 1911.

The authors discuss especially the treatment of stammering, stuttering, deaf mutism, mutism—speech defects due to chorea. They describe in detail a case of apoplectic aphasia. Ed.

1550

Anesthetic Injections of the Superior Laryngeal Nerve in the Treatment of Dysphagia in Tuberculosis. J. GAREL, *Ann. des Mal. de l'Oreille du Larynx du Nez. et du Pharynx*, p. 639, No. 7, 1911.

Garel recommends the following solution: Novocain, 0.02; adrenalin gtt's 1; natr. chloridi, 0.009; aquae, 1.0. He feels that it is only by anesthetising the whole area at the seat of the nerve trunk by an injection of this solution that this symptom may be relieved. The author discusses the various methods of injecting this anesthesia and advocates most strongly that of Hoffmann. Ed.

1551

Non-tuberculous Hemoptysis and Pseudo-hemoptysis. GAREL and GIGNOUX, *Lyon Med.*, p. 1913, Dec. 24, 1911.

Studying the literature the author finds that in sixty-eight cases, varices at the base of the tongue were responsible for the supposed hemoptysis; in three cases the varices were in the pharynx. Congested larynges neuropathic conditions, menstrual disturbances, chronic nephritis, liver disease, chronic catarrhal affection of the trachea, etc., are often the cause of the hemorrhages. Ed.

1552

Auscultation of Cough. A. H. GARVIN, *N. Y. State Jour. of Med.*, Oct. 11, 1911.

There are four positions of the cough in the respiratory cycle: (1) At the beginning of inspiration and end of expiration; (2) during inspiration (important in advanced stages of tuberculosis); (3) at the zenith of inspiration (obscure); (4) during expiration. The author points out that one of the advantages of this procedure is its simplicity. Ed.

1557

Removal of a Laryngeal Polypus Under Guidance of the Pharyngoscope. O. GLOGAU.

Original contribution to THE LARYNGOSCOPE, p. 1019, Oct., 1911.

1559

New Methods of Treating Stenoses of the Esophagus. GOYANNES, *Rev. de Méd. y Cir. prac. de Madrid*, Vol. 34, No. 1, p. 158, 1911.

In a boy of 17 years in whom an impenetrable stenosis of the esophagus had ensued following erosion by drinking lye, Goyannes proposed the following course. Opening the stomach by laparotomy; inserting then a catheter through the stenotic opening of the esophagus from below; by means of this catheter a long strand of silk is passed upwards through this opening and fastened to the mouth or cheek. The laparotomy wound is closed with exception of a small fistula-like opening to admit of further passage of the catheter. Daily treatment of the esophageal stenosis was undertaken, and by means of gradually increasing sizes of catheters the stenotic opening was gradually enlarged, so that on the eighth day after operation the patient was able to swallow fluids, a condition previously impossible.

Similar successful treatment was carried out in the case of a woman, 35 years old, who had a cicatricial stenosis of the cardia following gastric ulcer.

GOLDSTEIN.

1564

Action of Salvarsan in Syphilis of the Larynx. F. HENKE, *Muench. med. Wchnschr.*, p. 1670, July 25, 1911.

In the two cases reported, syphilitic dyspnea was relieved by the use of salvarsan. This case is reviewed on page 45 of Dr. Mayer's article on "Treatment of cicatricial stenosis of the larynx," published in the January, 1912, issue of THE LARYNGOSCOPE.

Ed.

1566

Surgical Treatment of Laryngeal Perichondritis. V. HINSBERG, *Ztschr. f. Ohrenh. u. f. Krankh. der Luftw.*, Bd. 62, Heft 4, p. 303, 1911.

Hinsberg details the histories of the cases in which he employed this procedure. Three methods are possible, but the best results are obtained by making a laryngeal fissure, and then carefully resecting all the diseased cartilage, followed by immediate dilatation. The author has operated on eight cases, within the last eight years, by this method, and has found it very satisfactory.

Ed.

1572

Treatment of Severe Cases of Bronchial Asthma with Vasotonin. M. JACOBSON, *Dissertation-Berlin*, 1911.

Jacobson reports on his experiences with vasotonin in the treatment of bronchial asthma, in Professor Kraus' clinic in Berlin. His results have been very successful; almost all of the patients showed decided improvement and this therapy is warmly recommended.

1575

Removal of Larynx and Pharynx. F. KAISER, *Jub. Vol. of Prof. Berg*, March 27, 1911.

The author reports a case of laryngectomy with resection of a large part of the pharynx and esophagus, in a woman aged 48 years. The Gluck method was employed. Recovery.

Ed.

1580

Treatment of Dysphagia in Tuberculosis by Injection of the Superior Laryngeal Nerve. Lannois, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 629, No. 7, 1911.

Lannois injected cocaine into the superior laryngeal nerve and obtained for the patient temporary relief from the dysphagia. But disturbing accumulations of mucus in the throat resulted. In the future the author states he will, however, use only alcohol, because longer relief is obtained.

Ed.

1585

Total Laryngectomy in Two Stages. P. Le Bec, *Bull. d'Oto-Rhino-Laryngol.*, p. 48, Jan., 1911, and *Prat. Mcd.*, p. 19, No. 3, and p. 33, No. 4, 1911.

Abstracted in THE LARYNGOSCOPE, p. 500, April, (Index Medicus issue), 1910.

1588

Analgesia of the Larynx by Alcohol Injection of the Internal Branch of the Superior Laryngeal Nerve. A. Lewy.

Original contribution to THE LARYNGOSCOPE, p. 9, Jan., 1911.

1589

Esophago-plasty. E. Lexer, *Muench. med. Wchnschr.*, July 18, 1911.

Lexer reviews minutely the literature on this subject and the results obtainable by the present operative methods. He reports a case upon which he operated and in which the results were very satisfactory. His method was a combination with that of Roux. It is especially indicated in cases of impenetrable, benign stenoses. However, it is of advantage in the treatment of esophageal carcinoma provided the cases are operated in the early stages.

Ed.

1593

Laryngectomy by Aid of Spinal Anesthesia. Marengo, *Rev. de la Soc. med. de Buenos-Ayres*, No. 106-107, 1911.

Man, aged 70 years, in whom laryngectomy was performed, under novocain anesthesia injected into the spinal cord. The puncture was made between the first and second lumbar vertebrae. The result was very good, both in respect to the operation itself and to the anesthesia. Ed.

1595

Removal of Epiglottis in Laryngeal Tuberculosis. J. Moeller, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Vol. 4, Heft 4, p. 509, 1911.

Moeller has removed the epiglottis in twenty-five cases of laryngeal tuberculosis; the Alexander guillotine was used. The clinical histories show that almost all of the patients were in an advanced stage of pulmonary tuberculosis, and that their general condition was poor. Consequently the operative results were not good. Nine of the ten last cases operated died several weeks after the endo-laryngeal operation; one case was cured.

Ed.

1598

Use of Antitoxin in Asthma. H. R. PARKER, *N. Y. State Jour. of Med.*, Jan., 1911.

Parker did not have much success with the use of antitoxin in asthma and has abandoned this therapy. He states that a successful treatment must also take into account the psychical elements. Ed.

1605

Intratracheal Insufflation as an Anesthetic Method. W. C. QUINBY, *Boston Med. and Surg. Jour.*, Oct. 19, 1911.

In this method a tube is passed into the trachea to a point above its bifurcation, and conveys a constant stream of etherized air. The respiratory movements of the chest become gradually less in numbers in the course of anesthesia, finally ceasing, yet the normal heart beat, blood pressure, and oxygenation of blood continue. The advantage of the method is pointed out for intra-thoracic operations and for esophageal instrumentation. Patients are said to recover quickly from the anesthetic. EDGAR (GOLDSTEIN.)

1606

Treatment of Dysphagia in the Tubercular, by Injection of Superior Laryngeal Nerve. RENOUX, *These de Lyon*, No. 42, 1911.

Renoux first discusses the various other treatments of laryngeal tuberculosis and then details the several technics of injection. Hering, Garel and Pieniaseck performed this operation submucously; Rossbach (1893) injected morphin into the nerve; Braun and Viereck (1903) injected cocaine-adrenalin; Frey (1907) injected the nerve with cocaine not only in cases of tuberculosis but also for removing papillomata. Garel and Lannois used cocaine solutions in the laryngeal nerve followed by alcohol injections and obtained very good results. A full discussion of the size of the various doses and of the rapidity with which reaction takes place is given. Ed.

1615

Treatment of Stuttering. E. W. SCRIPTURE, *Jour. A. M. A.*, p. 1168, April 22, 1911.

"Stuttering" and "stammering" are, in English synonymous. Laryngeal cramps are the never failing symptoms of stuttering. The muscles in and around the larynx become tense and fixed. Cramps and spasms of the muscles of the lips and tongue are the most apparent to the observer. An almost constant symptom is excessive rapidity of speech. The stutterer always lacks confidence in his ability to speak correctly. This produces anxiety, which in turn increases the nervous affection of the muscles. The simplest form of stuttering is that of "pure habit," which frequently occurs when a child copies the stuttering of one of his associates. If the stuttering does not go beyond this stage, it is dropped on removal or cure of the one copied. The stutterer nearly always goes beyond the "habit" stage. People laugh at him, mock him, scold him, threaten him with punishment, or whip him. Usually he is obliged to

repeat words he stumbles on. He is made to go through reading and speaking exercises. Extra hard words are given him to practice on. Speaking becomes a torture for him. A new element, the fear of displeasing and appearing ridiculous produces the "fright stage."

The curative treatment is based on the following principles: (1) A new method of speaking. If he tries to express his thought in any unusual manner the emotional disturbance does not arise. This explains the familiar fact that the stutterer never has any trouble when he sings what he wants to say. He can speak without stuttering if he will use an abnormally low or high voice, or draw the vowels, or slur the consonants, or speak in a choppy, staccato voice. These methods are objectionable because they leave the patient with a queer voice; people often tell him that the cure is worse than the disease. The essential point is that the stutterer should feel his acquired speaking-voice to be different from his stuttering voice. There is another way of speaking which is unusual to the stutterer, namely, the way in which normal persons speak. When he speaks in this way, he does not and cannot stutter. The therapeutic procedure on this principle will, therefore, be to teach him to speak normally.

(2) The principle of habit-formation. The new way of speaking is to be drilled into the patient until it becomes a habit.

(3) Spontaneity. Without it he will repeat perfectly, but still be unable to speak correctly of his own accord.

(4) Increasing the elements of embarrassment. First in presence of the instructor only, then of one or two others, then of a class, then in stores, or over the telephone, etc.

(5) Correct and prompt thinking. A series of fifteen exercises are given in detail for inculcating these five principles. WRIGHT.

1616

Laryngostomy for Laryngeal Papillomata. SEBILEAU, *Bull. med.*, Dec. 13, 1911.

Sebileau reports on a case of laryngeal papillomata for which laryngostomy was performed. The wound was closed by the Gluck method. In some cases treatment with the bi-polar current gave good results.

Ed.

1617

Treatment of Loss of Voice. O. SEIFERT, *Berl. klin. Wchnschr.*, p. 1589, Aug. 28, 1911.

Seifert classifies aphonia into hysteric, reflex, professional neuroses, that due to cerebro-spinal affections, and that in which no cause is apparent. In the case of a man, 36 years old, belonging to the last class, the author attained excellent results by the following procedure: The patient was made to lie on a sofa, the back of his neck supported on the thigh of an assistant seated near the sofa, while his head was dropped a little and the feet supported on a stool. The patient was thus made to breathe deeply and relax all the muscles. In a few days he was told to whisper "ah" and "ay," and then other sounds, in as

deep a voice as possible, while the physician compressed the abdominal walls after each inspiration. In two weeks he was able to perform his exercises in a sitting position, pressing the epigastrium to prevent contraction of the diaphragm and muscles of the abdomen. In a month the patient was cured and has remained so, to date, one year after the treatment.

Ed.

1625

Sub-hyoid Pharyngotomy in Epithelioma of the Epiglottis. TAPIA, *Rev. espan. de Laringol.*, No. 8, 1911.

The tumor was situated on the laryngeal side of the epiglottis and involved the right arytenoid cartilage; no commissure, however, existed. After tracheotomy, sub-hyoid pharyngotomy, tumor removed *in toto*. No disturbances in deglutition nor speech resulted.

Ed.

1627

Adrenalin in the Treatment of Asthma. E. TRANQUILA, *Gaz. med. di Roma*, 1911.

Tranquilla concludes: Morphin acts more quickly than adrenalin. If the asthma be accompanied by cardiac dilatation adrenalin and oxygen together with cold applications over the heart are effective. Regulation of diet and iodides administered between attacks favors action of adrenalin.

Ed.

1628

Treatment of Stenosis of Larynx. B. VOINOFF, *Russki Wratsch*, Nos. 9-10, 1911.

Voinoff discusses cases of laryngeal stenoses following diphtheria in which intubation sufficed to relieve the condition, and also those in which a tracheotomy had to be performed in addition to the intubation.

Ed.

1632

Foreign Bodies in Bronchi. W. UFFENORDE, *Ther. Monatsh.*, May, 1911.

Uffenorde reports two cases to emphasize the importance of suspecting foreign bodies in the presence of puzzling symptoms. In the first case foreign body was not suspected for three months. It (a part of a hook-and-eye fastening)) was finally removed by means of a big magnet, after an emergency treacheotomy. The other case was one in which a child had aspirated a bean into its bronchus. The bean swelled and the vocal cords prevented extraction. Tracheotomy. Phlegmonous complication delayed healing; during fourth week fatal convulsions. Uffenorde points out the danger of attempting removal of a foreign body that can swell if it has been in the air passages over a day. Ed.

1633

Esophago-plasty and Its Modification. VULLIET, *Semaine Med.*, p. 529, Nov. 8, 1911.

Vulliet holds that esophago-plasty has decided advantages over gastrotomy, and should be performed in all cases of benign non-dilatable stricture. He feels that it can be performed by the general practitioner.

Ed.

1641

Tests of Virulence of Diphtheria Bacilli. B. L. ARMS AND E. M. WADE.
Jour. A. M. A., March 18, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 736, June, 1911.

1645

Remarks on Diphtheria of the Nasal Mucosa in Children. BIEHLER and KORYBUT-DASZKIEWICZ, *Przegląd pediatryczny*, Bd. 3, Heft 2, 1911.

From observations on many cases, the authors conclude: (1) That primary nasal diphtheria is relatively frequent during the first years of life; (2) the course of the disease is not characteristic, therefore one must not neglect a bacteriologic examination in chronic catarrh; (3) serum treatment is the only practical one; (4) the course of primary nasal diphtheria in children is light and it is only seldom that the diphtheria extends from the nose to the pharynx, larynx, etc. Ed.

1646

Diphtheria Intoxication with Insidious Course. A. BINGEL, *Deut. Arch. f. klin. Med.*, Bd. 104, Nos. 3-4, 1911.

Bingel reports eleven cases; three fatal and eight cured. The symptoms appear after convalescence from the original attack. They are vomiting, motor agitation, delirium, apathy, pallor, diarrhea, and point to toxic effects resulting from the antitoxin. Heart-stimulants, venesection, saline infusion, etc., are without avail. The best therapeutic measure according to Bingel is lumbar injection of antitoxin to replace a withdrawn quantity of cerebrospinal fluid. No ill effects followed this procedure save a slight rise in temperature. Ed.

1650

Active Immunization Through Nostrils Against Diphtheria. N. BLUMENAU, *Jahrb. f. Kinderh.*, Aug., 1911.

Blumenau details a method devised by Dzierzjowsky by which active immunization against diphtheria may be obtained. Improvement was necessitated by the fact that 5.5 per cent of the children with measles and scarlet fever to whom prophylactic injections of 500 or 600 antitoxin units were administered later developed diphtheria, and in 18.4 per cent ill effects due to the serum were apparent. The new methods consist of inserting alternately for one hour each day, during ten days, a wad of cotton dipped into diphtheria toxin. It has been found that in this way an immunity may be obtained, lasting for months or years. When rapid action is desired the method may be combined with passive immunization by injections of antitoxin. If by-effects are feared the toxin may be diluted with twice the amount of salt solution and the cotton inserted but every three days for only half hour periods. Thus there is no injury to the mucous membrane and the immunity is quite as marked.

Ed.

1651

Treatment of Phlegmonous Diphtheria. N. R. BLUMENAU, *Arch. f. Kinderh.*, Bd. 55, Nos. 5-6, 1911.

This is a report from the Children's Hospital in St. Petersburg, 1895-1908. Of the 265 cases of phlegmonous diphtheria admitted, 67 died the first day. The average age of the children was 5 years. Vomiting is always a serious symptom. A mild nephritis was present in almost all the patients. The author recommends free doses of antitoxin given intravenously. Ed.

1652

Puerperal Infection with Diphtheria Bacilli. E. BOURET, *Obstetri.*, Oct., 1911.

Bouret's case is the forty-second one recorded. His patient had great difficulty in breathing but no wheezing or croupiness. Serum treatment usually gives good results but did not prevent the development of a nasal and pharyngeal diphtheria after the genital diphtheria, in cases reported by Blumm. In only three of the record instances were the infants infected. Ed.

1655

Successful Use of the Staphylococcus Spray on Diphtheria Carriers. S. R. CATLIN, L. O. SCOTT and D. W. DAY, *Jour. A. M. A.*, p. 1452, Oct. 28, 1911.

Owing to a failure of complete immunization being obtained from the administration of 1,000 to 2,000 units of antitoxin, the authors upon the recommendation of Prof. Harris used a spray of broth culture of staphylococcus pyogenes aureus to clear the throats of the nurses among whom an epidemic had spread and some of whom carried the diphtheria organisms in their throats without showing clinical evidences of the disease. No harmful results followed the introduction of the staphylococci, and nurses with hitherto positive culture-findings gave constantly negative ones thereafter. Ed.

1660

Classification of Diphtheritic Conjunctivitis. H. FRIEDENWALD, *Jour. A. M. A.*, p. 1454, May 20, 1911.

Microscopical examination showed that the diphtheria bacillus caused the conjunctivitis as well as the co-existing rhinitis and pharyngitis in the patient, aged 56 years. Since the nasal and pharyngeal symptoms developed after the conjunctivitis, the author holds that the eye was the primary seat of infection. Ed.

1671

Mistaken Diagnosis of Diphtheria and its Consequences. LESIEUR, *Lyon Med.*, March 12, 1911.

Lesieur reports on several personal observations, especially on a case of phlegmonous angina with albuminuria and atrophy, cured by means of diphtheria serum. The author mentions another case, which was at first diagnosed as angina, but showed itself, by later symptoms (laryngeal paralysis, asthenia and rheumatic pains), to be diphtheritic. Ed.

1673

Diphtheritic Paralysis. LOVE, G., *Glasgow Med. Jour.*, Oct., 1911.

Of 1,313 cases of diphtheria under the writer's care during a period of 10 years, 85 (6 per cent) became paralyzed. The incidence of the paralysis was markedly greater the later in the course of the disease the antitoxin was administered. Of the 85 cases, 65 (77 per cent) recovered and 20 (23 per cent) died. In no case could death be attributed solely or directly to the paralysis, although in all cases the latter was contributory. In 8 cases the nose was involved, and in 7 the larynx, tracheotomy being required in 3. The paralysis affected in 53 cases the palate alone, in 15 the eyes and the palate, in 3 the eyes alone (strabismus), in 12 the intercostal muscles and heart, in one the legs, while in one, the history of which is given, the paralysis was more or less general. The average duration of the paralysis was 18 days. The average amount of antitoxin administered in the cases under consideration was 22,000 units. Palatal paralysis rarely occurs before the third week, and ocular not usually till after the fourth. Paralysis of accommodation generally occurs before strabismus, which is noticed most often about the sixth or seventh week and is generally of the internal variety. GUTHRIE.

1674

Record of Ninety Diphtheria Carriers. A. G. MACDONALD, *Lancet*, March 25, 1911.

Carriers are always intimately associated—mother and child, nurse and child, child and child associated closely at play. Class-room proximity was not found to be an important factor in spreading the disease. Controlling the disease means controlling quarantining and observation. The cases can be detected by bacteriological examination. The diphtheria bacillus is essentially a human parasite; therefore transference from animal to man is rare. Ed.

1676

Chronic Diphtheria of the Ear. L. MEKLER, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 876, May, 1911.

This case is interesting because aural diphtheritic complications due to throat diphtheria are very rare and because the complication developed a long time (four years) after the initial infection. Ed.

1696

Remarks on Nasal Diphtheria. J. SZMURLO, *Medycyna i Kronika*, Nos. 11-12, 1911.

Contrary to the usual opinion, Szmurlo holds that nasal diphtheria is not rare. He observed a case of nasal diphtheria even in a child, 1 month old. The course of the disease may be acute or chronic. A thick, white layer covers the nasal mucous membrane. When this coat is removed, hemorrhage results. The pharynx is often intensely inflamed. If antitoxin be not applied the process spreads rapidly to the pharynx and larynx. The diagnosis may always be confirmed bacteriologically. The therapy of the author consisted in serum injections, nasal douching with H_2O_2 , use of pyocyanese. All of the thirty cases reported recovered. Ed.

1697

Unrecognized Diphtheria in Childhood. E. TERRIEN, *Ann. de Med. et Chir. Infant.*, March 1, 1911.

Terrien is of the opinion that many cases of malignant diphtheria result from the fact that the infection developed in some obscure place and was not recognized until throat symptoms appeared. There are several cases reported in which there were no false membranes; the bacilli manifested themselves merely in severe, persisting coryza; serious blood-stained nasal discharge and excoriation of the upper lip; membranes restricted to the nasal fossae; adenoiditis. Diphtheritic adenoiditis is unusually virulent and grave, especially due to the difficult diagnosis. When a bacteriologic examination is to be made the specimen is to be got from behind the velum, through the nose. Ed.

1699

Wound Diphtheria. FRED. A. THOMPSON and W. R. MACAUSLAND, *Boston Med. and Surg. Jour.*, p. 329, Aug. 31, 1911.

Two months after an operation for a compound fracture of the patella an infectious process, which had continued since the operation, and which showed on culture staphylococcus aureus, now first revealed the Klebs-Loeffler bacillus. Simultaneously there appeared a sore throat. The infection was a virulent one, and extreme toxemia set in. Over a period of sixteen days, 40,500 units of diphtheritic antitoxin were given. This, combined with the most rigorous surgical treatment, gained a final control over the disease, and recovery resulted.

The authors then take up the literature on the subject and find but few cases of wound diphtheria reported. These are briefly reviewed.

BERRY (MOSHER.)

1704

Theory as to the Untoward Effects of Diphtheria Anti-toxin; Prophylaxis in Suspicious Cases. R. WALLACE, *Med. Rec.*, Jan. 7, 1911.

Wallace sounds a note of warning against the use of horse serum, except in the most urgent cases, in sensitized individuals or in those having bronchial asthma or other respiratory affections. Insufficiency or inadequacy of the suprarenal glands may be the cause of this reaction in asthmatics. If aqueous suprarenal extract be hypodermically administered prior to the serum, the vaso-motor system may thus be rehabilitated and controlled. Ed.

1705

Guinea-Pig Test of the Virulence of Diphtheria Bacillus. P. G. WESTON and J. A. KOLMER, *Jour. of Contagious Dis.*, April, 1911.

No method of testing the virulence of the diphtheria bacillus is ideal because it is impossible to have conditions similar to the human body. The tests are used in cases harboring bacilli morphologically similar to diphtheria; those lately recovered; those contact cases which may harbor virulent bacilli; discharges from ears which have diphtheria-like bacilli; nasal discharges which have bacilli present.

If the bacilli are Gram-positive, they are then grown on broth with one-half per cent glucose and brown for forty-eight hours. A healthy guinea pig is selected, a dose of five per cent of body-weight injected into its abdomen. If the animal dies within four to six days, with no evidence of other infection, and a diphtheria-like bacillus is recovered from the pleural or peritoneal cavities, one is justified in concluding that it is a diphtheria bacillus.

HALSTED.

1707

A Study of Non-diphtheritic Exudates. S. S. WOODY and J. A. KOLMER,
Arch. of Ped., June, 1911.

This is a study based upon a series of cases treated by the authors in the Philadelphia Hospital for Contagious Diseases, and studied from both a clinical and a laboratory standpoint. They argue strongly for the co-operation of the clinician and the bacteriologist. Many of the cases presenting non-diphtheritic exudates were diagnosed clinically as diphtheria, the correct diagnosis being made only on bacteriologic examination.

They represented four specific infections, viz.: Plaut-Vincent's angina, pneumococcic, streptococcic, and staphylococcic anginas. Of Vincent's angina there were 24 cases, 17 occurring in the diphtheria, one of them requiring intubation. The other 7 cases developed in the scarlet fever department. The differential diagnosis is entered into, both from the clinical and bacteriologic standpoint. Attention is called to the fact that the fusiform bacillus and the spirochete of Vincent's angina, do not grow on culture media, and to be found a direct smear must be examined. Of the pneumococcic exudates there were 74 cases and of this number, 34 occurred in the diphtheria department, 30 being sent in with a diagnosis of diphtheria; forty cases occurred in the scarlet fever department. The lesions occurred on the tonsils in 59 cases, on the soft palate and uvula 7 cases, and on the buccal mucosa in 8 cases. A clinical differential diagnosis cannot be made with any degree of accuracy. Perforating ulcer of the soft palate due to pneumococcic infection sometimes occurs, especially in impoverished subjects of scarlet fever.

The streptococcic exudates varied from a light, smeary, filmy, whitish exudate to the thick, dirty, foul and necrotic exudate of anginoid scarlet fever. It is often difficult to exclude diphtheria, and a slight erythematous rash may make the differential diagnosis from scarlet fever also difficult, and sometimes impossible. Of 447 cases sent to the hospital with a diagnosis of diphtheria 5.59 per cent failed to show the Klebs-Loeffler bacillus, but revealed repeated pure cultures of streptococci. About 40 per cent of scarlet fever cases show streptococci in the throat when cultured on coagulated blood serum, and 70 per cent if the cultures are made directly into glucose bouillon and incubated 24 hours and then sub-cultured.

Of the staphylococcic exudates the typical one is that seen in lacunar tonsillitis, but of the 447 cases admitted with a clinical diagnosis of diphtheria, 3.35 per cent were purely staphylococcic. So frequently is there a mixed infection of the staphylococcus and the Klebs-Loeffler,

the former often obscuring the latter, that in a suspected case of diphtheria, one negative culture is not sufficient. Two at least should be made before diphtheria is excluded. In making a culture, the swab should be taken from around the edges or beneath the exudate where the bacilli are actually at work—otherwise in many cases the Klebs-Loeffler will be overlooked, the more innocent staphylococci only being discovered.

The study of these cases seems to prove that Vincents' angina, pneumococci, streptococci and staphylococci all cause exudates, and produce other clinical symptoms that make a differential diagnosis from diphtheria at times most difficult and require laboratory assistance to determine the cause of the disease. The laboratory may furnish wrong results in diagnosing diphtheria through faulty methods of culturing or because of an overshadowing secondary infection. To obtain best results clinical observations and laboratory findings must be used conjointly. If laboratory methods were employed more frequently, a broader knowledge of the exudates would be obtained, and substantial gains made in overcoming diphtheria.

HALSTED.

1708

Ultimate Results of Operative Treatment of Exophthalmic Goiter. H. ALAMARTINE and E. PERRIN, *Lyons chir.*, July, 1911.

The author reports the results in 120 cases of exophthalmic goiter gleaned from cases reported by seven surgeons. A three years' interval elapsed since the performance of the operation. In eighty-five cases the cure was complete; in twenty-seven there was marked improvement. Though 6.6 per cent were not greatly benefited yet even in these cases the special symptom permanently subsided.

Ed.

1714

Case of Acute Suppurative Post-grippal Thyroiditis. I. BAHRI, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 129, Feb. 4, 1911.

Man, aged 40 years. During the disappearance of a severe grippal cold in the head, his neck began to swell until he had great difficulty in deglutition and breathing. Examination revealed a smooth, hard swelling in larynx, extending to the sternum; also swelling of right aryteno-epiglottic folds due to an edema which involved ventricular bands. Symptoms improved within a week. Incision made in median line and abscess drained. Streptococci in pus. Uneventful recovery.

Ed.

1715

End-results of Treatment of Exophthalmic Goiter. M. BARACH, *Beitr. z. klin. Chir.*, Aug., 1911.

Barach draws his conclusions from a study of ninety cases treated at the Breslau clinic. Marked improvement or cure was effected in all but six of the forty surgical survivors while not one of the twenty treated by medication can be regarded as cured; two are slightly improved. Until now surgical intervention was only resorted to after all internal measures had failed. The author pleads that this is wrong, that ex-

ophthalmic goiter should be regarded as a surgical affection even in its earliest stages and that only the surgically hopeless cases should be turned over to the internists. Ed.

1717

Present Knowledge of Thyroid Function. S. P. BEEBE, *Jour. A. M. A.*, p. 659, March 4, 1911.

Some authors assert that they have proved by experiment that the thyroid gland has an especial function, namely to protect the body against infection. Thyroid extract has indeed a decided bactericidal action yet not greater than that of the liver or intestines. In those animals to whom thyroid extract was administered an increase in the alexin contents was found and it is well known that myxedematous and cretinous individuals have little resistance to infection. Ed.

1718

Recent Developments in the Physiology and Pathology of the Thyroid Gland. S. P. BEEBE, M. D., *N. Y. Med. Jour.*, p. 73, July 8, 1911.

Enucleation of the para-thyroid is generally followed by a peculiar tetany relieved by extracts. No such symptoms on removal of thyroid. The purpose of the thyroid gland is not to promote a physiological action to take place within itself, but to furnish to the circulation an iodine proteid compound which acts upon a variety of distant tissues. Improved methods of Riggs in the author's laboratory have led to the conclusion that the thyroid always contains at least a trace of iodine, though the amount of the latter may vary within wide limits in health. We do not know how much thyroid material is needed to maintain normal conditions. The work of Marine emphasizes the relation of iodine to histological structure. The paper considers further the chemical and physiological nature of the thyroid secretion and its inter-relations with the other ductless glands and the etiology of Graves' disease.

EDGAR (GOLDSTEIN.)

1724

Experimental Goiter and Goiter Heart from Drinking Water. E. BIRCHER, *Deut. Ztschr. f. Chir.*, Nov., 1911.

Bircher conducted these experiments to ascertain the etiology of goiter which is endemic in certain districts of great altitude. He concludes that the endemic form is due to the chemical, not bacterial action of drinking water. The water was filtered to free it of all bacteria, yet he was able by means of it to produce goiter in rats; the residua, however, gave negative results. Ed.

1729

Parathyroids, Especially in Relation to Tetany in Infants. R. W. BLISS, *Ztschr. f. Kinderh.*, Bd. 2, No. 6, 1911.

Bliss could find no special connection between the hemorrhagic changes in the parathyroids and tetany. He draws these conclusions from a study of thirty-five cadavers of children varying in ages from a few months to 9 years. Ed.

1730

Acute Inflammation of the Thyroid Gland. C. W. BONNEY, *Lancet*, July 15, 1911.

Man of 30 had a small goiter for sixteen years accompanied by tumor and pulse-acceleration. After an attack of croupous pneumonia (crisis on seventh day) the thyroid gland rapidly increased in size; fever, dyspnea, dysphagia and radiating pains in the shoulders. Operation one week later. The left thyroid lobe was found to contain pus from which a pure culture of pneumococci was obtained. Ed.

1737

Cultivation in Vitro of the Thyroid Gland. A. CARREL AND BURROWS, *Jour. Exp. Med.*, April, 1911.

The authors have made innumerable cultures of the thyroid glands of mammals. Small portions of the glands were removed from anesthetized dogs, cats and guinea-pigs, and cultivated in plasma of the same animal or from that of one of the same species. The prolific elements were connective tissue and epithelial cells. These cells remained active in the culture for two weeks or longer. By means of a second or third culture the period of "life" could be prolonged. The authors point out that cultivation of glands in vitro may be used to study their internal secretion. Ed.

1744

Phylogenetic Association in Relation to Exophthalmic Goiter and Sexual Neurasthenia. G. W. CRILE, *Bull. med. and chir. Faculty of Md.*, July, 1911.

Some of the principal points made by Crile are: The mechanisms by which the motor acts are performed, and the mechanisms by which the emotions are expressed are one and the same. These acts in their infinite complexity are performed by association, i. e., phylogenetic association. When our progenitors came in contact with excitation in their environment, action ensued then and there. There was much action—little restraint. Civilized man is subjected to innumerable stimulations without action. When these stimulations are sufficiently strong, but no action ensues, an emotion is produced. A phylogenetic fight is anger; a phylogenetic flight is fear; a phylogenetic copulation is sexual love—and so one finds in this conception an underlying principle which may be the key to an understanding of exophthalmic goiter. When through pathologic changes there is a constant stimulation of the whole motor mechanism from a hyperexcitability of the motor mechanism or what amounts to the same—a lowered threshold of the receptors that lead to action, and form an increase of activating internal secretions that apparently reciprocally excite each other—exophthalmic goiter is produced. Rest, which breaks the pathologic chain at the brain, or excision of the thyroid, which breaks the pathologic chain at the thyroid, are the two recognized forms of treatment.—*Ex.*

1753

Woody Thyroiditis. X. DELORE and H. ALAMARTINE, *Rev. de Chir.*, July, 1911.

The authors report a case in which the thyroid gland was transformed in a hard mass and caused serious symptoms due to compression. Cancer was suspected and half of the gland removed, when microscopic examination revealed its woody texture. The case terminated fatally four days after the operation due to a fulminating hemorrhage which occurred six hours after the dressing had been changed. Thirteen cases are recorded, which the authors review; in one there was evidence of tuberculosis, in another the symptoms subsided after a mercury and iodid therapy. One case is recorded in which the symptoms were relieved by Roentgen-ray treatment. The affection usually occurs between the ages of 30 and 40 years. Ed.

1756

Idiopathic Non-purulent Acute Thyroiditis. H. V. DUTROW, *Jour. A. M. A.*, p. 1761, Nov. 26, 1911.

Dutrow's case is the only one thus far diagnosed in the Ancon Hospital. The symptoms were: swelling in throat which soon became painful, temperature 102°, Exploratory incision, but no pus found; the wound was drained for two days and then allowed to close. Treatment: Application of ice, cathartics, tonics, regulated diet. Recovery was complete. No constitutional signs were apparent throughout the course of the disease. Ed.

1765

Sarcoma Arising from Thymus Gland in Adult. J. FUNKE, *N. Y. Med. Jour.*, p. 636, Sept. 23, 1911.

This tumor was taken from the autopsy, from a male 48 years old. There was no evidence of the existing neoplasm during the life of the individual as there were no symptoms referable to such a condition; the clinical diagnosis was myocarditis and chronic enterstitial nephritis.

This mediastinal tumor was a sarcoma arising from an ectopic goiter. It was seen on opening the thorax, a mass not unlike that of the heart and the pericardium. It measured 7x5x4 cm. in diameter, presenting a comparatively smooth surface; and contained several cysts filled with a deep yellow substance. Histologically the tumor is composed of two distinct parts: Group 1 contains principally thyroid tissue; group 2 contains typical tumor tissue but no thyroid structure. GOLDSTEIN.

1767

Temperature in Thyroid Operations. G. GALATTI, *Dissertation-Berlin*, 1911.

Resorption of ordinary thyroid extracts has no influence on post-operative fever. But the extract from struma Basedowi has the peculiar property of influencing the pulse and body temperature directly, and, therefore the acute post-operative complications of morbus Basedowi, especially changes in pulse-rate and temperature, must be regarded as resulting from resorption of this thyroid extract. Ed.

1771

The Heart in Disease of the Thyroid. J. S. GILFILLAN, *Jour. Minn. State Med. Ass'n.*, Jan. 1, 1911.

Gilfillan refers to a paper presented by Professor Rose in 1877 in which that author called attention to the influence of tracheal obstruction upon the heart. The author then points out that in addition to the respiratory obstruction cardiac changes may produce toxic influence. He classified goiter-heart as: mechanical or Roses's heart and toxic or the goiter-heart of Kraus. The symptoms of the former are cardiac dilatation and insufficiency in addition to tracheal obstruction. Not only goiter but the pressure of any tumor may produce these symptoms. The second type is produced by the action of an altered or hyperthyroid secretion. Its symptoms are: strong, rapid heart-action, frequently with enlargement of the left ventricle. In goiter-heart the ordinary heart-remedies are of little avail; iodine should be used with great care. Rest, diet and sodium phosphate are of value; operation should not be deferred. Ed.

1772

Relation of the Thyroid to the Female Genital Organs. J. R. GOODALL and L. C. CONN, *Can. Med. Ass'n. Jour.*, May, 1911.

The conclusions reached are: The relation between the female genital organs, especially the ovaries, and the thyroid is very close. The uterus, apart from its effect on the action of the ovaries, has no influence upon thyroid activity. To a certain extent the thyroid function is governed by ovarian activity; ovarian hyperactivity often causes exophthalmic goiter; diminution or absence of ovarian activity results in myxedema. Puberty, menstruation, pregnancy, lactation and the menopause have a profound influence on thyroid secretion. The secretions from the thyroid and ovary neutralize each other, through the secretion from the interstitial cells of the ovary. Ed.

1779

Alteration of the Circulation in Goiter. C. C. GUTHRIE and A. H. RYAN, *Interstate Med. Jour.*, Feb., 1911.

In experiments on dogs the authors found marked anatomical changes after alteration of the circulation; the greatest change being noticed when the circulation was reversed in the inferior thyroid by anastomosing this vein with the central end of the common carotid artery or by anastomosing the artery with the peripheral end of the internal jugular vein below the origin of the inferior thyroid vein. These researches show that deranged thyroid functions are to a great extent present and active in the general symptoms of goiter. Ed.

1783

Extirpation of the Thyroid Gland in Monkeys. J. HALPENNY and J. A. GUNN, *Can. Med. Ass'n. Jour.*, p. 842, Sept., 1911.

The authors report as follows from experiments in removing the thyroid and parathyroids in monkeys: I. remained well three days; died sixth day; slight tremor and listlessness. II. remained well four days, then stupidity and paresis. Twelfth day, puffiness of face. Died seven-

teenth day. III. Tetany on third day, died on seventeenth day, emaciated. IV, tetany on seventh day, died on eighteenth day, emaciated. V, nervous symptoms on thirteenth day. Animal recovered after five days and remained well until sixty-third day when paresis occurred. On seventy-first day, coma; thyroid extract given; tetany; death on seventy-second day. VI, well until seventy-first day, then malaise and loss of appetite; death on eighty-first day. VII, slight nervous symptoms on fifth day; tetany on thirty-sixth day; death on following day. VIII, on thirty-sixth day three doses of thyroid extract given at intervals; tetany; death on fortieth day.

Ed.

1789

Stenosis of the Upper Air-passages in Goiter. HOELSCHER, *Arch. f. Laryngol. u. Rhinol.*, Vol. 25, No. 2, p. 187, 1911.

The writer gives the history of seventeen cases of goiter operated on by himself and states that, owing to the elasticity and immovability of its cartilaginous rings, the trachea withstands the pressure of an hypertrophic lobe to a marked extent, being displaced to the free side in extreme conditions of unilateral enlargement. In slow growth the system inures itself to the laborious breathing, the slit-like opening becoming surprisingly small without causing symptoms. In rapid growths, severe and intolerable dyspnea may occur with comparatively slight tracheal obstruction.

Local anesthesia was resorted to in his first operations, which frequently had to be supplanted by general narcosis, to overcome pain and anxiety of the patient, who, during attempted luxation of deep-seated lobes and inevitable traction on the trachea, feared suffocation. An ideal anesthetic, especially in difficult cases where quick and calm work is essential, being morph. scopolamin ether narcosis. The usual time consumed for the removal of cystic or parenchymatous goiters, freeing and ligating principal vessels, making an almost bloodless operation was in uncomplicated cases, about eight minutes. The majority of the patients were discharged in six to eight days.

KLEENE (STEIN.)

1793

Slight General Enlargement of Thyroid Gland as Found in School Children. C. W. HUTT, *Lancet*, April 1, 1911.

Hutt calls attention to the frequency in some districts of enlargement of the thyroid gland, but his cases are too limited to warrant conclusions. In the cases investigated, no accompanying symptoms, as anemia, mental hebetude, exophthalmos, tremors of hands, nor increased pulse-rate were present.

Ed.

1817

Observations and Experiments on the So-called Thyroid Carcinoma of the Brook-trout and its Relation to Endemic Goiter. D. MARINE AND C. H. LENHART, *Jour. Experim. Med.*, April, 1911.

The authors arrive at the following conclusions as a result of a series of observations upon the thyroids of brook trout, extending from the time of hatching to fish of four or more years old; the development of the

thyroid hyperplasia has been followed step by step: (1) There is no stage of thyroid hyperplasia in brook trout that may be classified biologically as carcinoma; (2) The incidence of true carcinoma in fish goiter is not greater than in mammalian goiter; (3) There is no evidence that goiter is either infectious or contagious; (4) Goiter is endemic in all hatcheries where the salmonidae are artificially reared. Its severity is quantitatively related to the general hygienic conditions prevailing, and to the food, water supply, and degree of crowding; (5) The immediate cause of goiter is unknown, but it depends in all probability on a disproportion in, or a lack of, certain of the elements necessary for proper nutrition. Ed.

1818

Pathologic Anatomy of the Human Thyroid. D. MARINE and C. H. LENTHART, *Arch. f. Int. Med.*, April, 1911.

The authors make the following classification of thyroid disease:

- I. Normal thyroid.
- II. Active hypertrophies and hyperplasias (goiter). 1. Developing from the normal thyroid. 2. Developing from the colloid gland (goiter).
- III. Colloid glands (goiters).
- IV. Regeneration (hyperplasias).
 - V. Atrophies: 1. Premature atrophies: (a) of obesity. (b) of cretinism. (c) of myxedema. 2. Senile.
- VI. Degenerations: 1. Hyaline. 2. Amyloid. 3. Calcareous, etc.
- VII. Inflammations: 1. Acute thyroiditis. 2. Chronic thyroiditis.
- VIII. Tumors: 1. Benign. (a) Fetal adenoma. (b) Simple adenoma. 2. Malignant. (a) Carcinoma from fetal adenoma (carcinoma simplex). (b) Glandular carcinoma. (c) Sarcoma. (d) Endothelioma.
- IX. Complications: 1. Hemorrhage. 2. Cyst formation. (a) From hemorrhage. (b) From fetal adenoma.

Thus, there are nine major anatomic divisions, which represent different physiologic or pathologic stages. The first four divisions, viz., normal thyroid, active hypertrophy or hyperplasia, colloid gland and regeneration, are physiologic. The remaining five divisions are properly designated as pathologic and are only the generally accepted groupings common to all body tissues.—*Ex.*

1821

Large Intrathoracic Cysts of the Thyroid Causing Dyspnea. W. MARTIN, *Ann. of Surg.*, June, 1911.

Martin reports seven cases. He details the symptoms. Tracheoscopy and the X-rays are of aid in the diagnosis. The therapy usually consists of opening the cyst, suturing the cyst-wall to the margin of the skin-wound and draining. They do not usually refill. Removal of the cystic wall of the intrathoracic portion has not been attempted. Ed.

1824

Fistula from Patent Thyro-glossal Duct. H. MATTI, *Arch. f. klin. Chir.*, Bd. 95, No. 1, 1911.

The fistula extended from the foramen cecum to the apex of the process pyramidalis of the thyroid gland. External opening of the canal caused secondary formation of a retention-cyst. The fistula was exposed to within $1\frac{1}{2}$ cm. from the superior surface of the tongue, then tied and resected. Recovery. Ed.

1831

Researches on Endemic Goiter. R. MCCARRISON, *Indian Med. Gaz.*, July, 1911.

McCarrison has been using vaccines made from a colliform organism grown from the feces of the sufferers, administered in doses of from 150,000,000 to 300,000,000 every seven to ten days. After five or six inoculations at most the swelling disappeared entirely. In one case a staphylococcus vaccine was successfully employed. The author points out the peculiar circumstances that though staphylococcus albus does not cause goiter, its vaccine can cure the disease in certain cases. Ed.

1839

Acute Cancer of the Thyroid. P. MOURE and G. LIEBAULT, *Rev. hebdom. de Laryngol. d'Otol. et de Rhinol.*, p. 337, Sept. 16, 1911.

Robust man, presenting diffuse tumor of neck. The diagnosis was very difficult, in that it could not be determined whether this tumor was of inflammatory origin or a cancer. To prevent asphyxiation a palliative incision was made, but the man succumbed within a few days, probably from edema of the glottis. Anatomico-pathologic examination pointed to a diagnosis of acute cancer of the thyroid body. The beginning of the symptoms had followed upon a severe, definite, general infection; therefore, the authors conclude that the infection merely started the already latent cancer. Ed.

1844

Two Thousand Goiter Operations. A. OBERST, *Passows Beitr.*, Jan., 1911.

Oberst reports on his observations, since 1883, of patients at the Freiburg clinic. In seven cases post-operative tetany developed. It is urgent to take every precaution not to injure the para-thyroids; in fact, one should take care not to interfere with the region of the recurrent nerve, as the parathyroids also usually lie in this region. Ed.

1845

Pathological Findings in the Parathyroids in a Case of Infantile Tetany. B. S. OPPENHEIMER, *Am. Jour. Med. Sci.*, p. 558, April, 1911.

All tetanies are due to a toxin which is due to some disorder in the calcium metabolism. The function of the parathyroids is to neutralize this toxin. If these glands do not function properly tetany results. In eighty-nine autopsies performed on infants Escherich and Yanose have found thirty-three instances of hemorrhage in the parathyroids. One

case is especially interesting. The child, aged 8 months, was brought to Dr. Koplik because of repeated attacks of convulsions. Between attacks, however, the child was well. Chrostek, positive; Trousseau, negative. In a few months the child developed laryngeal stridor and died. At autopsy hemorrhage was found in the parathyroids. Ed.

1849

Malignant Struma of the Thyroid. M. PLESSNER, *Deut. Ztschr. f. Chir.*, April, 1911.

This case was operated by Most. The growth was found to be a cystadenoma papilliforme, with signs of malignancy. Clinically the interest lay in its relatively slow growth. Ed.

1850

Diseases of the Thyroid in the Female. M. T. PORTER, *Am. Jour. of Obstetr.*, Nov., 1911.

Women are five times more prone to thyroid disease than men. The gland is larger in the female than in the male and is intimately connected with the woman's sexual life. During menstruation and pregnancy the thyroid enlarges normally; the toxemia of pregnancy and puerperal infections are probably often due to inactivity of this gland. Goiter is frequently due to genital disorders, while perverted thyroid functioning may cause amenorrhea, dysmenorrhea, hemorrhagia, sterility, mental aberration, premature separation of the placenta and chlorosis. Bone deformities are sometimes observed in the children of mothers having goiter. Ed.

1866

Fracture of the Thyroid Cartilage. E. M. ROYLE, *Lancet*, July 15, 1911.

Woman of 74 years fell and struck her neck. Ten minutes later, dyspnea. Death in spite of immediate tracheotomy. Autopsy revealed horizontal fracture of the right thyroid cartilage with profuse submucous hemorrhage at this point. Ed.

1868

Thyro-parathyroid Secretion as Wright's Opsonin. C. E. DE M. SAJOUS, *N. Y. Med. Jour.*, p. 961, Nov., 1911.

The conclusion is reached from the data submitted, that we are able by the use of thyroid preparations which contain parathyroid to increase the opsonic power of the blood both in health and disease, and thus, so far as the opsonins can do so, enhance at will the defensive resources of the organism. EDGAR (GOLDSTEIN).

1873

Acute Thyroiditis Following Potassium Iodid Treatment. J. SELLEI, *Deut. med. Wchnschr.*, March 23, 1911.

Reviewed in *THE LARYNGOSCOPE*, p. 809, July, 1911.

1876

Manifestation of Thyroid Disease in Upper Respiratory Tract. B. R. SHURLY.

Original contribution to *THE LARYNGOSCOPE*, p. 145, March, 1911.

1884

Accessory Thyroid Tissue Within the Pericardium of the Dog. J. L.SWARTS and R. L. THOMPSON, *Jour. Med. Research*, April, 1911

Accessory thyroid tissue frequently occurs in the dog, as is well known. It has been found in the region of the gland itself, in the mediastinum and even in the abdomen. While doing experimental research-work on dogs, the writer's attention was called to the presence of this tissue in a locality hitherto not noted. This led to a careful examination of thirty dogs, and in twenty-four of these this same peculiarity was found, namely, the presence of accessory thyroid tissue in the pericardial sac. In these twenty-four animals a total of sixty-eight glandules was found, located as follows: "Twenty-six lay in the sub-epicardial pre-aortic fat; forty-one were found in the sub-epicardial fat or connective tissue on the posterior surface of the ascending aorta extending into the transverse sinus of the pericardium; and one was found extending into the pericardial cavity from the serous surface of the anterior parietal pericardium." They were for the most part sessile, though some were pedunculated. The color ranged from grayish-pink to reddish-brown. They showed a rather firm consistency. In no case was the blood-supply seen to come direct from the coronary arteries, or the ascending aorta but could be traced indirectly through the brachiocephalic trunk or the internal mammary arteries. In size they varied from millary glandules to the largest, which measured 22 by 14 by 12 millimeters. Microscopically they showed a striking resemblance to the appearance of the thyroid gland of the same animal. The majority showed a normal glandular substance; many showed hyperplasia; and a few showed colloid golter.

After enlarging upon the conditions found in these experiments, and giving in tabulated form the results obtained, the writers take up the embryology. Referring to similar supra-pericardial bodies found in fishes, reptiles, birds and the lower mammals, they consider more in detail the development of these glandules in the rabbit and in man. They explain the position of the thyroid tissue in the pericardium: "by the proximity of the sites of origin and the early development of the thyroids, the heart and the aorta; and by the outgrowth of epithelial cords of primitive thyroid tissue into connective tissue, which are subsequently drawn down into the thorax by the caudad migration of the heart."

The authors have not as yet found thyroid tissue in the pericardium of man.

BERRY (MOSHER).

1890

Regeneration of the Extensive Loss of the Thyroid Cartilage. TURRINI.*Arch. ital. di Otol. Rinol. e Laringol.*, p. 371, No. 5, 1911.

Experiments on animals were undertaken, wounds being made in the thyroid cartilage; these were histologically examined at various stages of the investigation. The author states that in serious wounds of the thyroid cartilage slight necrosis of the borders of the wound were to be found, followed by the reproduction of the perichondrium of the cartilage.

Where loss of substance was sustained this was regenerated by the internal and external perichondrium and by incomplete proliferation of the cartilage.

LASAGNA.

1891

Retro-pharyngeal Goiters. G. TRAUTMANN, *Arch. f. Laryngol. u. Rhinol.* Bd. 25, No. 1, p. 73, 1911.

A man, 43 years old, who has been under observation since 1907 without alteration of initial symptoms, whose previous health has always been good, complained about throat trouble. Laryngoscopic examination showed a peculiar and surprising condition during respiration, a red and smooth mucous membrane-covered tumor, almost filling the entire glottis, the border of the epiglottis and a small area of the introitus laryngis being visible, arising mainly from the left posterior pharyngeal wall. During phonation it is thrown upward and backward appearing to be reduced in volume; thus freeing the epiglottis, true and false cords, the true cords looking slightly congested, the arytenoids remaining partly covered.

With Kirkstein's spatula, the tumor was easily seen on the posterior pharyngeal wall, as well as when palpated with the sound and finger, and found to be of elastic consistency. Incision and puncture proved it to be solid. A Roentgen picture showed a spindle-shaped tumor, beginning at the base of the skull, extending along the anterior surface of the vertebrae, bulging forward against the hyoid bone and larynx in which it lay, and somewhat crowding the trachea. Its unchangeable condition, absence of adenopathy, the good health of the patient, perfect breathing and deglutition excluded a diagnosis of malign or benign tumor, or gumma; a retro-pharyngeal goiter without connection with the thyroid was diagnosed. The patient was treated for simple laryngitis, which soon improved; no other disturbance was present. The prognosis in these cases is good, though operative measures are needed. Indications for partial or total extirpation depend on pressure or absence of other thyroid tissue.

KLEEN (STEIN.)

1908

Surgical Treatment of Exophthalmic Goiter. W. BARTLETT, *Jour. Mo. State Med. Ass'n.*, p. 115, Sept., 1911.

Of Bartlett's forty-five partial thyroidectomies, thirty-two are in good condition, while two died. If the operation be performed upon advanced cases it should be preliniated by hospital treatment and rest in bed. Bartlett operates under local anesthesia. He recommends the operation provided no general anesthetic is used, and loss of blood and shock are properly guarded against.

Ed.

1909

Intubation in the Dorsal Position. E. R. BEDFORD, *Jour. of Ophth., Otol. and Laryngol.*, p. 165, May, 1911.

Bedford states that the main advantages of this method are that few assistants are required. Very often he performed the operation without any. The patient is placed upon a table, lounge or bed, the gag put into his mouth and the cricoid cartilage located with the index-finger of the left hand. Then the tube is passed anterior to the finger. In extubating the finger is also used as a guide. The mortality is about 27 per cent. Previous to the use of antitoxin it was 66 per cent. Ed.

1917

Therapeutic Utility of Diphtheria Antitoxin with Remarks on Anaphylaxis and on the Feasibility of a Scratch Test. A. CAILLE, *Post-grad.*, July, 1911.

Although the death rate of diphtheria has been markedly reduced it is still too high. The principal reason is the failure to sufficiently recognize the great divergence of clinical manifestations of diphtheria. Delay in administering antitoxin in doubtful cases, pending microscopic diagnosis is deprecated. Among such conditions overlooked by physician and parent are cases of tonsillitis, nasal or post-nasal diphtheria, diphtheritic broncho-pneumonia, diphtheritic complications of scarlet fever, measles, or whooping cough, conjunctivitis, puerperal sepsis, facial erysipelas, and enteritis. Antitoxin is indicated in some non-diphtheritic conditions. For detecting hyper-susceptibility to serum preparations in their parenteral application to sensitized persons, a scratch test is suggested.

EDGAR (GOLDSTEIN.)

1919

Operations on the Cervical Sympathetic in Exophthalmic Goiter. A. CHALIER, *Lyon Chir.*, Nov., 1911.

This article is a further report on thirty-one cases operated on by Jaboulay, in which the superior ganglion and two or three centimeters of the nerve was resected. Ninety-five per cent of the cases were permanently cured while the results of thyroidectomy are less constant. The operation in women is of better prognosis than in men.

Ed.

1920

New Principle in the Treatment of Hyperthyroidism. G. W. CRILE, *Lancet-Clinic*, April 1, 1911.

Crile points out the inter-relation between the brain and thyroid which results in an increased thyroid secretion and a heightened brain activity. Breaking the nerve-connection between the brain and the thyroid gland renders the disease curable, but the operation must be followed by complete restoration of the thyroid and brain. The operation must not cause an excitation of the nervous system nor of the thyroid. It should be followed by complete rest for a month or longer.

Ed.

1921

Administration of Diphtheria Antitoxin by the Mouth. G. I. CUMBERLEGE, *Brit. Med. Jour.*, July 15, 1911.

The points in favor of this method are stated by the author to be: (1) the results are quicker; (2) a smaller dose is required (4,000 units at a time being the largest quantity, 2,000 units the usual one); (3) the dosage may be administered at intervals, of two or four hours; (4) there are no signs of serum sickness while after injections there is frequently rash or joint pains.

Ed.

1925**Ligation of Thyroid Arteries Especially in Exophthalmic Goiter. X.**

DELORE and H. ALAMARTINE, *Rev. de Chir.*, Sept., 1911.

The conclusions drawn are that since ligation on animals shows no appreciable physiologic effect but causes histologic changes in the gland which reduces its functional capacity, this procedure is safe and logical. Vascular struma and exophthalmic goiter are indications for this intervention, while in secondary exophthalmic goiter and in that of nervous origin, it is contra-indicated. Ed.

1926**Treatment of Exophthalmic Goiter with Milk of Thyroidless Goats. W.**

EDMUNDS, *Lancet*, Dec. 9, 1911.

Edmunds feels that the advantage to be obtained from this method of treatment depends upon the amount given. He states that it is well to mix the dried milk with an equal quantity of sugar of milk which acts as a preservative. The author is of the opinion, however, that this therapy has not been sufficiently tried out as yet. Ed.

1929**Electricity in the Treatment of Post-diphtheritic Paralysis of the Velum.**

G. FUMAROLA, *Polichin.*, March 12, 1911.

Five cases are reported. In the first three cases the paralysis was of twenty to forty days' standing. After three or four treatments, great improvement was apparent and entire relief resulted after eight to eleven applications. In the fourth case reported the paralysis was of seven years' standing and no benefit resulted. In the fifth case the treatment was begun too soon, on the sixth day while the diphtheritic neuritis was still in progress and an aggravation of both subjective and objective symptoms was the result. A rapid, intermittent, faradic or alternating sinusoidal current may be used, for fifteen minutes at a time. A large electrode is placed on the back of the neck and the patient's hands or feet are placed in a bowl of water. The treatment should not be painful. Ed.

1930***Lycopus Virginicus* as a Remedy for Exophthalmic Goiter. EDGAR J.**

GEORGE, *Jour. of Ophth. and Oto-Laryngol.*, March, 1911.

The author looks upon this disease as a neurosis of the vagus or a disturbance of its nucleus or ganglionic connections. The increased heart-action raises the blood-pressure. The coats of the arteries of the thyroid gland and those within the orbits became exhausted, causing enlargement and protrusion. Surgical interference will never effect a complete cure of the disease, while *lycopus*, through its influence on the vagus and its centers, will produce excellent results. STEIN.

1932**On Some Points Connected with the Serum Treatment of Diphtheria.**

E. W. GOODALL, *Brit. Med. Jour.*, Feb. 11, 1911.

Goodall points out the danger involved in using diphtheria as a prophylactic remedy. He urges that the patient, even though he be not an

asthmatic nor naturally susceptible, may be rendered artificially so. In epidemics of diphtheria, Goodall admits it may be wise to use antitoxin as a prophylaxis, but he cautions that before its administration one should familiarize oneself with the histories of the patients. Ed.

1938

Thyroid Extract in Carcinoma. E. H. JONES, *Brit. Med. Jour.*, Feb. 25, 1911.

Thyroid secretion causes increased proteid catabolism, and lowers the blood-pressure, causing increased lymph circulation. Now, Jones states that the increase in the former activity stimulates catabolic processes within the cancer-cells; thus causing their degeneration and also produces fibrosis of the connective tissue, modifying it in such a way that it becomes unfavorable to cancerous invasion. Therefore the author holds that thyroid extract may be of great value in combatting cancer.

Ed.

1945

Treatment of Diphtheria Bacillus Carriers. M. KRETSCHMER, *Med. Klinik*, Jan. 15, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 701, June, 1911.

1948

Technical and Critical Remarks Upon Peroral Intubation. F. KUHN, *Arch. f. Laryngol. u. Rhinol.*, p. 95, Heft 1, 1911.

Kuhn gives a resume of the history of catheterization of the larynx prior to intubation through the mouth. He then describes the various cannulae and tubes used (Paracelse, Hunter and Monroe, Desgranges, Fim). He describes the methods of Desault, Thullier, Weinlechner and Schroetter. He mentions and compares the instrument devised by Stockum to stop bleeding and at the same time protect the air-passage from secretions; the various apparatus (Maydle, Doyen) employed in general anesthesia, those used in intra-thoracic surgery, that of Fell which has a double tube for air and the anesthetic. Kuhn details the technic for intubation, the position of the patient, the introduction of the tube. The article is well illustrated.

Ed.

1950

Diphtheria Antitoxin as a Prophylaxis. W. MARKUSON and W. AGOPOFF, *Arch. de Med. des Enf.*, May, 1911.

The authors did not have much success with preventive injections of antitoxin to protect children with measles against diphtheria. Of the 1,178 children injected, 2.12 per cent developed diphtheria in the first week, 2.04 in the second, 0.51 in the third, 0.26 in the fourth and 0.17 after the fourth week. Of the 1,156 children not injected, 1.56 per cent developed diphtheria in the first week, 1.73 per cent during the second week, 0.52 during the third week, 0.78 during the fourth and 0.43 after the fourth week. Among the children injected there was a mortality of 36.6 and among those not injected one of 32.3 per cent.

Ed.

1962

Diphtheria Antitoxin in Erysipelas. O. POLAK, *Wt. med. Wchnschr.*, July 22, 1911.

Polak reports on the use of diphtheria antitoxin in forty-three cases of erysipelas. This therapy was very satisfactory, only very septic cases died, and even in these a reaction was observed. If no effect be observed after the first dose, it should be repeated on the following day. Polak believes this treatment prevents recurrences. Ed.

1974

Value of the Pyocyanase Treatment in the Persistence of Diphtheria Bacilli. SOERENSEN, *Muench. med. Wchnschr.*, March 2, 1911.

After subsidence of the fever and pharyngeal symptoms, the diphtheria patients were submitted to three different therapies, to combat persistent diphtheria bacilli: Loeffler's menthol-tuluol-iron solution pyocyanase and concentrated iodid-iodid of potassium. If this treatment was not effective within two weeks, another medication was employed. The menthol-solution gave the most satisfactory results; pyocyanase ranked next. Iodid was only used for those cases which did not yield to other methods. A very limited number of cases did not respond to treatment and were dismissed before all the bacillus had been eliminated from the system. But from all obtainable reports they did not spread the disease. Ed.

1977

Treatment of Exophthalmic Goiter with Specific Anti-serum. A. E. TAYLOR, *Jour. A. M. A.*, p. 263, Jan. 28, 1911.

Taylor reports the results of experiments with Beebe's antithyroid serum on animals (Belgian hares) carried on at the University of California some years ago. These animals were subjected to increasing doses of the thyroid protein prepared according to the published directions of Beebe, until the serum of one of them on being tested gave a good precipitation with the material used in the immunizations. The only variation in the technic was the adding of trikresol for chemical sterilization. The results were negative and for this reason Taylor did not publish them at the time, not wishing to throw doubt on positive statements so long as the question was one of experimentation. Since then others have published negative results, however, and he therefore offers these. Dr. P. K. Brown of San Francisco tried this serum in several cases of active Graves' disease with similar negative results. Specific reaction gradually decreased until within a year it ceased altogether. Evidently the precipitating protein is denatured on standing, probably through a reaction of hydrolysis. Ex.

1989

Congenital Fistulae. J. H. P. B. BARRETT, *Dublin Jour. Med. Sci.*, March, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 786, July, 1911.

1994**Supernumerary Auricle Associated with Chronic Suppurative Otitis Media.**H. HAYS, *Ann. of Otol. Rhinol. and Laryngol.*, p. 627, Sept., 1911.

Patient came to clinic complaining of profuse discharge from right ear. Examination showed large supplementary auricle ($1\frac{1}{4} \times 1\frac{1}{2} \times 1\frac{1}{2}$ cm.); tragus very large; eczematous condition involving auricle and canal had developed due to profuse discharge. Drum examination difficult because of intense inflammation. In childhood two more appendages had been removed. No other congenital defects. Ed.

1996**Circumscribed Ganglionic Tuberculosis of the Lobe of the Ear.** F. T.HENRICH, *Ztschr. f. Ohrenh. u. f. Krankh. d. Luftw.*, Bd. 62, Heft 4, p. 334, 1911.Abstracted in *THE LARYNGOSCOPE*, p. 1055, Nov., 1911.**1999****Congenital Malformations of the External Ear.**H. IWATA, *Passows**Beitr.*, Bd. 5, Heft 4, p. 258, 1911.

Iwata reports three cases. In one the right auricle was entirely missing. There was also a congenital bony atresia of the external auditory canal and a right facial paralysis. In the second case, there was a rudimentary malformation of the right auricle with congenital atresia of the auditory canal; hemiatrophia facialis due to hypoplasia of the paralyzed facial nerve, and teratoid swelling of pharyngeal tonsil.

The third case was simply one of bony atresia of the auditory canal. The hearing-tests pointed to the fact that these developmental defects did not involve the labyrinth. The author discusses the possible operative, therapeutic measures. Ed.

2000**Case of Carcinoma of the Pinna and of the External Auditory Canal.** H.KIEFER, *Ann. of Otol., Rhinol. and Laryngol.*, March, 1911.

The patient was a male, a miner, 48 years old. Had bloody purulent discharge for two years. Received local treatment without result. The inner surfaces of the tragus, antitragus, choncha, and external auditory canal, to with $\frac{1}{4}$ cm. of the drum-membrane were denuded of the epithelium and the swollen roughened cartilage was exposed to view. Granulations were present over the area and bled freely. Sharp pricking pains existed at times.

Specimens were removed for microscopical examination and the report showed malignant sarcoma, probably originating in the ceruminous glands. Removal of the diseased superficial tissue was practiced and skin-grafting was carried out. This had to be repeated, as the first grafts did not grow.

About a month later the patient was discharged with the entire area healed. No return was reported six months later. LEDERMAN.

2002

Screw-worms in the Ear. W. S. LORIMER, *Jour. A. M. A.*, p. 208, Oct. 7, 1911.

Child of 4 years apparently perfectly healthy, but peevish for two days. No previous illness. Examination revealed a small, white moving object in right ear. Chloroform and boric acid solution applied to the ear brought out three screw worms. Ed.

2003

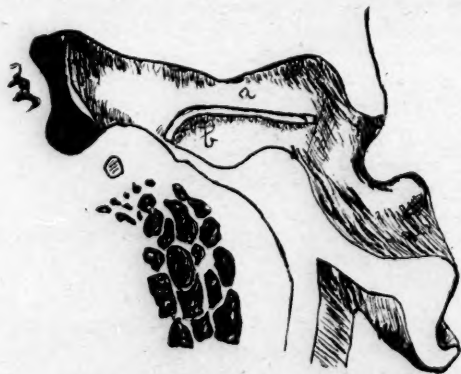
Ossification of the Cartilage of the Auricle of the Ear. K. LUEBBERS, *Passows Beitr.*, Bd. 5, Heft 1, p. 26, 1911.

In five cases Luebbbers verified roentgenographically as well as histologically a diagnosis of ossification of the cartilage of the auricle of the ear, with formation of typical sponge bone. In one case the etiology was unknown; in another case the so-called physiologic ossification of Bochdalek was present; in the other three cases the ossification resulted from freezing. The causes of ossification are nutrition-disturbances in the cartilage. Ed.

2004

Longitudinal Septum in External Auditory Canal. A. MALAN, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 408, Sept., 1911.

In a lad with otorrhea a septum was found in the external auditory canal, dividing the same longitudinally into two parts; one anterior-



a. Anterior canal. b. Posterior canal.

inferior ending in the fundus, and the other in the tympanic cavity. The author describes this as a congenital formation due to persistent anomalous ectodermic folds at the first branchial cleft. LASAGNA.

2005

Syphilitic Chancre of the External Ear. MASSIA and CHARVET, *Ann. des Mal. de l'Oreille, du Larynx du Nez et du Pharynx*, p. 1143, Dec., 1911.

The author reviews the literature and reports thirty cases. Kraus states that he observed only one case of syphilitic chancre of the external ear in every 500 examined, and Mahu found but one in 394 cases. Statistics show that these cases are very rare. They are more frequent in the male, and occur between the ages of 20 and 30 years. Earrings are seldom the predisposing cause, but rather infection through kissing, scratching or biting.

Ed.

2006

Stenoses and Atrasias of the External Auditory Canal. R. MATA, *Clin. y Lab.*, June, 1911.

Stenosis of the auditory canal may be either congenital or acquired. The former have little clinical importance, while the latter may cause serious complications. Acquired stenoses are usually the sequelae of suppurative otitis media, external otitis, repeated furunculoses, eczematata; rarely of osteomata and fibromata of the auditory canal. The stenosis may be tubular or annular, complete or incomplete. They are often situated at the junction of the external and middle ears. Their treatment is always a surgical one.

Ed.

2007

How to Correct Protruding Ears. MERMOD, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 737, No. 8, 1911.

The perpendicular portion of a semi-lunar segment must be resected from the concha. Cicatrization on the posterior surface remains unnoticeable, if the resection is identical on both auricles and the proper aseptic precautions are taken.

Ed.

2008

Operation for Pedunculated Exostosis of External Auditory Meatus. S. B. MUNCASTER, *Jour. A. M. A.*, p. 1555, May 27, 1911.

S. B. Muncaster recommends, as an easy method of removing the ivory hard exostoses of the auditory canal, the use of an extemporized notched toothed saw made of No. 1 snare wire or No. 1 piano wire. A piece of such wire twelve inches long placed on a hard board and nicked obliquely one inch in the center of it about one hundred times, with a sharp, heavy knife the blade of which is not brittle, will make a sharp-toothed saw which will cut through the hardest bone. After application of cocaine and epinephrin to contract the tissues and for local anesthesia, and washing out the canal with a one to five thousand bichlorid solution, the wire-toothed saw can be adjusted around the growth with an ear snare handle. The free ends are twisted around pieces of wood for handles and the growth is sawed through slowly to prevent heat and breaking of the wire. The exostosis must not be wider at the base than at the end, otherwise the saw will not be of service.—*Ex.*

2011

Two Cases of Congenital Fistula of the Helix. SIEUR and ROUVILLOIS, *Bull. d'Oto-Rhino-Laryngol.*, p. 24, Jan., 1911.

Case 1. Both on the right and left side, on the anterior parts of the helix, about two centimeters below the tragus, small external fistula approximately the shape of the Greek letter omega. It was independent of the surrounding organs; no other deformity in any part of the body. **Excision.** Complete healing.

Case 2. Woman having tumor the size of the head of a glass-headed thumb tack, in the center of which there was a small orifice. When 17 years old she had had two small abscesses at about this site, which produced a tendency toward encystment. Removal refused. Apropos of these two cases the author remarks that the percentage of these anomalies is high, and one would never suspect such malformation in cases of preauricular abscess. The pathogenesis is uncertain. The only treatment is an operative one. Ed.

2012

Epithelioma of the Auricle. K. F. SONNTAG, *Brit. Med. Jour.*, June 17, 1911.

The patient was a man of 80 years. For four years he had had a small wart on the lower part of the left helix. Eczema of the auricle; also thickening and desquamation. After a year the wart developed into a fungous ulcer, involving both sides of the auricle. No glandular swelling. Microscopic examination disclosed squamous-celled carcinoma. Recovery after extirpation. En.

2015

Contribution to the Bacteriology of Acute Purulent Otitis Media. ALBERT, *Arch. of Otol.*, June 16, 1911.

In 110 cases of acute purulent otitis media, the author found only 18 cases to be caused by the streptococcus mucosus, and of these only 2 cases were in pure culture; these did not show the malignant tendencies attributed to this class of cases by other investigators; 3 were complicated by perisinus abscess; 1 with sinus thrombosis; 1 with extra-dural abscess in the middle fossa, and 1 with extra-dural abscess in the posterior fossa. YANKAUER.

2016

New Attempts at Locally Anesthetizing the Tympanic Membrane. W. ALBRECHT, *Arch. f. Ohrenh.*, p. 198, Bd. 85, Heft 3, 1911.

By means of ionophore the author passes a twenty per cent cocaine and adrenalin solution into the tympanum through an intact epidermis. A cotton tamponade, soaked with the solution, is fixed to the positive pole of an electrode and brought in contact with the tympanum. The intensity of the current is from 1.5 to 2 milliamperes. After a three or four minutes' application, one can make a painless paracentesis. This method is not applicable for furuncles because of the need of a more extensive anesthesia. Ed.

2018

Case of Mania During an Acute Otitis Media. L. BECO, *Presse Oto-Laryngol. Belge*, p. 337, Aug., 1911.

Such cases are very rare; the above was the twelfth recorded. The surprising feature of the case is that the mental trouble developed after paracentesis of the tympanum and after the pus was being absorbed. The patient had never before had auditory hallucinations, and the tinnitus and aural pains had greatly diminished before the mental trouble began. The author thinks that his case offered peculiar features in that in the other recorded cases the psychic troubles ceased upon the establishment of drainage.

Ed.

2023

After-treatment in Radical Middle-ear Operation. J. BOYSEN, *Hospitalstidende*, p. 417, 1911.

The author recommends the open treatment (no packing) of the operated cavity.

HALD.

2025

Penetration of Micro-organisms from the Tympanum Through the Membrane. C. CALDERA, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 7, Jan., 1911.

The author experimented on the normal tympanums of animals, but could never obtain the penetration of the micro-organisms into the middle ear by placing them in contact with the cultures.

LASAGNA.

2026

Middle-ear Infection Resulting in Tic Douloureux Singultus and Permanent Paralysis of the Left Vocal Cord. L. L. DANFORTH, *Jour. Ophth. Otol. and Laryngol.*, p. 446, Dec., 1911.

The patient was seized with "Grippe" accompanied by pain in left ear and left side of throat. Singultus began on the sixth day and tic douloureux on the twelfth day. On the twenty-first day of illness the patient was first seen by Dr. Danforth and exhibited a slightly bulging left membrana tympani, redness and edema of the tissues of the larynx, and paralysis of the left vocal cord. Singultus and exquisite tenderness of left face were still present. Danforth and Lloyd are of the opinion that this was a case of localized osteo-periostitis and meningitis at the apex of the petrous portion of the temporal bone, secondary to acute inflammation of the middle ear.

EDGAR (GOLDSTEIN.)

2027

Report of Three Cases of Mental Derangement Associated with Suppurative Otitis Media. E. W. DAY, *Ann. of Otol., Rhinol. and Laryngol.*, p. 388, June, 1911.

Case 1. Young widow, delicate and sensitive, whose vitality has been lowered by working to support herself and by church and social duties, is seized with an otitis media which spreads to the mastoid; operation. The wound heals slowly, due to her weakened condition. Worry over her illness, "lack of resistance to psychic and mental traumata," cause a

subacute and then acute delirium, which is stimulated by toxemia from the infection. Recovery is very slow.

Case 2. Iron-worker, aged 30, who had had a chronic purulent otitis media since childhood. During last two weeks, pain in mastoid region, discharge of pus, facial paralysis. Patient greatly worried over prospect of a mastoid operation. Necrotic area found over facial nerve. Returned after one month, complaining of headache and optic neuritis in right eye. Second operation. Nothing found in brain or dura to indicate pressure or pathologic changes. After this, mental symptoms developed; case diagnosed as dementia precox. The author here again points out that the operation merely precipitated the dementia but that the symptoms were there previously, latent.

Case 3. Man, aged 52 years, non-susceptible to mental impression but had shown slight mental derangements lately caused by severe suffering. A few months ago, acute suppurative otitis media complicating grip; since then almost constant headache on that side, which increased lately so that he could get no sleep at all. His mental condition appeared normal. Mastoidectomy: No pus or necrosis in mastoid antrum or middle-ear; sinus opened; well organized clot found between torcular and jugular bulb. Recovery complete and uneventful. Ed.

2029

Mechanism of New Form of Rupture of Drum Membrane. DE SANTALO. *Rev. espan. de Laringol.*, No. 8, 1911.

Soldier sustained knock on chin, due to a push; tinnitus, vertigo and decrease in hearing power. Examination showed both ears filled with cerumen; right drum-membrane ruptured over one-fourth of the surface; left membrane ruptured in three places. By pushing the man's chin Santalo could again produce a ceruminosis. The cause of this rupture phenomenon he explains as due to the pressure on the external surface of the drum-membrane by the sudden hurling of the secreted wax against the membrana tympani. Ed.

2035

Benign Pneumo-tympanic and Pneumo-frontal Sinus Complication Following Grippal Coryza. E. ESCAT, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 321, No. 9, 1911.

Escat describes the development of sudden air-compression in the tympanum or frontal sinus due to the entrance of mucus into the Eustachian tube or canalis naso-frontalis resulting from strenuous blowing of the nose by patients having influenza. The symptoms are similar to those in an acute otitis media or sinusitis, but disappear by themselves after a few days, or yield rapidly to treatment. Ed.

2036

Passage of Grain of Corn Through the Eustachian Tube into Tympanum. FEDERSCHMIDT, *Ztschr. f. Ohrenh. u. f. Krankh. d. Luftw.*, Bd. 62, Heft 4, p. 365, 1911.

Federschmidt's patient had had, some time ago, a left suppurative otitis media which was relieved but reappeared several weeks ago, accom-

panied by severe pains radiating from the ear to the neck, and headaches. Drum membrane almost totally defective, the mucous membrane of the promontory was very much reddened and thickened; profuse, foul-smelling pus-exudate. Cleansing with boric acid was entirely without avail. One day, after douching the ear, a white, elongated body came to view, which stretched from the tube to the short malleus process. At first it was thought to be a stream of pus, but when removal was attempted it was seen to be a grain of corn, 2 cm. long, 2 mm. wide at the base and 1 mm. at the top. After its extraction, the otitis healed quickly. The author is of the opinion that such foreign bodies enter the nasopharynx by inspiration through the nose rather than through the mouth. They lodge on the soft palate and through contraction of the musc. levator veli palatini they are pushed into the mouth of the Eustachian tube.

Ed.

2041

Acute Hemorrhagic Otitis Media, Paracentesis, Mastoidectomy, Extradural Abscess in the Middle and Posterior Fossa, Subdural Abscess, Purulent Circumscribed Meningitis, Sinus Thrombosis, Cerebellar Abscess, Operation, Healing. HASSLAUER, *Arch. of Otol.*, Nov. 9, 1911.

In the criticism of this case, the author speaks of the great difficulties attending the differential diagnosis of cerebellar abscess in the absence of classical symptoms such as cerebellar ataxia, nystagmus, dizziness, vomiting, abducens paralysis, etc. Of great value in establishing the diagnosis in this case was the fixed, localized occipital headache, the persistent vomiting, and the Cheyne-Stokes breathing. The labyrinth remained free, and was not the channel through which infection took place.

YANKAUER.

2043

Diagnosis and Treatment of Chronic Suppurative Otitis Media in Children. HAROLD HAYS, *Cron. Med. Quir. de la Habana*, June, 1911.

The author states that fifty per cent of all cases of chronic suppurative otitis media are acute cases that have received no treatment. In many cases the presence of adenoids or hypertrophy of the tonsils are the causes of the persistence of the discharge. He divides the treatment in preventive, palliative and surgical. The preventive treatment refers to cleansing out the nose and naso-pharynx and excision of all adenoid tissue that may be present, the palliative to irrigation of the ears with Fowler's douche and also surgical treatment of nose and naso-pharynx.

The surgical treatment is often necessary, extirpation of granulation polypi from the tympanic cavity and even the radical operation, especially if colesteatomatic degeneration be present.

MARTINEZ.

2050

Partial Exenteration with Preservation of the Tympanic Membrane.

H. LUC, *Bull. d'Oto-Rhino-Laryngol.*, July, 1911.

The objections to ossiculectomy usually given are: (1) The frequency with which deafness follows this procedure; (2) the greater risk of injuring the facial nerve; (3) the possibility of dislocating the stapes,

with danger of labyrinthine and meningeal infection; the harmlessness of the radical method. Luc answers these objections as follows: (1) Deafness is not always aggravated by ossiculectomy; some patients retain their hearing for the voice at six or seven meters. Besides immobility of the ossicles frequently causes dysacusia; (2) injury to the facial nerve may be avoided by using the same skill that is needed in the radical procedure; (3) the author himself has never had a case of labyrinthine infection, though he has used this method very frequently; (4) Luc admits the safety of the radical method, especially during the acute period, or in the presence of cerebral complications; but he feels that this does not argue against ossiculectomy when indicated. This procedure has the decided advantage of making it possible for the patient to resume his work a few days after the operation. Ed.

2054

Case of Pseudo-sarcoma of the Middle Ear. MARTIN, *Rev. Barcel. de Enferm. de Oido*, June 30, 1911.

Severe pain in the ear following a suppurative otitis; a cauliflower-shaped growth in the auditory canal, which bled even when slightly touched. Removal with cold snare. Microscopic examination, spindle-celled sarcoma. Pains did not decrease and radical operation was performed. The bone was very soft and all the cavities were filled with cholesteatomatous masses. A large retro-auricular opening was left. Pain discontinued; four months after the operation the patient was entirely cured. The author feels that the results of the operation warrant the conclusion that the diagnosis of sarcoma was incorrect. Ed.

2057

Clinical Data on a Form of Middle-ear Tuberculosis Hitherto Unobserved. J. MOELLER, *Ztschr. f. Ohrenh. u. f. Krankh. d. Luftw.*, Bd. 64, Heft 1, p. 4, 1911.

The subjective symptoms consist of impairment of hearing, no pains being present. The drum is considerably bulged, the handle of the malleus lies within a furrow and is sometimes perfectly hidden from view. The injection is less diffuse and weaker than in acute inflammation. The drum is of a whitish-yellow color, dull and without pellucidity; contrasting from this, there is a network of excessively filled blood vessels radiating from a central fascicle at the handle of the malleus towards the limbus. If paracentesis is performed, the knife passes through an extremely thickened and tough drum into an empty space, wherefrom no secretion is escaping. The opening heals next day, while the clinical picture remains unchanged. After weeks or months either a regressive metamorphosis, with return to the normal, takes place or the process develops one or more small ulcers that may heal or develop into suppuration.

Microscopic examination reveals a chronic inflammatory process with destruction of normal tissue and formation of fibrous tissue tending towards organization, without, however, forming typical tubercles. On account of the diffuse tuberculous infiltration of the drum, the writer calls this condition "Myringitis tuberculosa diffusa." GLOGAU.

2059

Chronic Otitis Media in Rural Districts.
p. 1871, Dec. 14, 1911.

E. NIELSON, *Ugeskr. f. Leger*,

A plea for early treatment.

HALD.

2063

Two Cases of Epi-tympanitis Combined with Infection of the Squamous Portion of the Temporal Bone and Pre-auricular Abscess. G. PINABOLI AND C. CALDERA, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 405, Sept., 1911.

In two cases of mastoidectomy with pains and tumefaction of the temporal bone and pre-auricular area a series of cells were found in the squama. The author emphasizes the importance of a differential diagnosis between maxillary arthritis and inflammation of these anomalous cells.

LASAGNA.

2064

Labyrinth Findings in Chronic Middle-ear Suppuration. A. POLITZER, *Arch. of Otolaryngology*, May 10, 1911.

The author gives the post-mortem findings in eighteen fatal cases in the course of chronic middle-ear suppuration. In ten of these, pathological changes were found in the labyrinth; in the remaining eight, the labyrinth was normal. All of these cases on admission to the hospital gave evidence of meningitis, and the labyrinth operation when carried out was of no avail. He lays particular stress on the importance of cochlea as a focus of suppuration, in as much as in the majority of his cases this organ showed signs of suppuration; he therefore draws the conclusion that where the indication for the labyrinth operation is present, the cochlea must be well exposed and cleaned, in addition to the free exposure of the vestibule. The author's choice of operation is dependent upon the indications. When the diagnosis of labyrinth suppuration is made, and there is also evidence of a deep extra-dural abscess or brain abscess, the Jansen-Neumann operation is the one of choice.

The author also makes a point of watching the behavior of the wound after the radical operation in cases of uncomplicated labyrinth suppuration; should the granulations form very rapidly and appear unhealthy, with accompanying fetid secretion, spontaneous healing will not take place, and the labyrinth operation is then performed; on the other hand, there is more likelihood that spontaneous healing will take place if there is rapid epidermization.

YANKAUER.

2068

Acute Middle-ear and Mastoid Inflammations. F. SNOW, *Lancet*, Oct. 14, 1911.

Closer observations during the past two years on acute pharyngeal, nasal sinus, middle-ear and mastoid inflammations have shown an intimate relation between those inflammations and an active auto-toxic state of the system, due to faulty metabolism or elimination. In such states the presence of bacteria in certain localities are opposed by only

a few weakened "attenuated anti-bodies." Since the researches of Hektoen located the probable formation of anti-bodies in the spleen and other lymphoid bodies, the author has frequently been prescribing small doses of calomel (gr. 1-10) frequently repeated, or of iodine with a reduction of one-half in the time of recovery formerly taken when depending on local measures only.

EDGAR (GOLDSTEIN.)

2069

Bacterium Pyocyanophilum Crocogenes in Chronic Middle-ear Disease.

SPIŁKA and LANG, *Chronik Lekarsky*, Vol. 12, No. 1-2, 1911.

The authors have found a bacterium in pus obtained from chronic otitis, which exhibits a characteristic morphology, a definite reaction to stains, and certain biologic traits. These bacilli were always found in conjunction with the bacillus pyocyanus; cultures could only be grown in media in which there was some pyocyanous products. The colonies were at first grey, later yellow, and finally assumed a saffron hue. The bacterium, which they designate as bacterium pyocyanophilum crocogenes, was found in 44 per cent of all chronic middle-ear suppurations, and the authors feel that it plays a role in chronic otitis.

Ed.

2071

Lymphatic Relation of Tympanic Cavity and That of Brain. Anatomical and Experimental Researches. D. TANTURRI, *Arch. internat. de Laryngol., d'Otol. et de Rhinol.*, March-July, 1911.

The lymphatic communication between the tympanic cavity and the brain is by means of lymphatic interstices and not by means of the lymphatic vessels. The author has experimented widely to prove this, and reports on his findings.

Ed.

2075

Objective Aural Tinnitus Associated with Hyperthyroidism. D. YATES, *Jour. of Ophthal. and Oto-Laryngol.*, p. 47, Feb., 1911.

Reviewed in *THE LARYNGOSCOPE*, p. 642, May, 1911.

2079

Physiologic Significance of the Malleo-incus Joints. H. FREY, *Arch. f. ges. Physiol.*, Bd. 139, 1911.

In a series of experiments on animals, Frey ascertained that at times there is a firm, partly osseous, partly cartilaginous ankylosis between malleus and incus; in some instances he found firm connective tissue, but in no case was there a true joint. In case of definite ankylosis between the two ossicles, no motion is possible, yet the uniform anatomy of the middle-ear in infants points to a similar hearing process. Therefore, Frey concludes that a simultaneous derangement of both ossicles during sound conduction is highly improbable. Hence, too, the supposition of a ratchet-like joint between them becomes groundless—the configurations of the parts contradict such a theory even if they could be regarded as motile. A ratchet only functions correctly if its axes pass through the median joint. The author finds, however, that the axis lies beneath this point.

Protection to the conduction apparatus against sudden pressure wave—a function which the ossicles might assume if mutually mobile, other apparatus may also be said to perform. Ed.

2086

Report of Cases Operated Upon by the Yankauer Method of Closing the Eustachian Tube. G. C. HALL.

Original contribution to THE LARYNGOSCOPE, p. 990, Oct., 1911.

2087

Case of Vertigo Cured by Treatment of the Eustachian Tube. EDGAR M. HOLMES, *Boston Med. and Surg. Jour.*, June 15, 1911.

The author reports a very interesting case of tubal inflammation causing intense vertigo, which was discovered and successfully treated by the pharyngoscope. The patient was 52 years of age. She had been under treatment at the Boston City Hospital Clinic for six months, with a diagnosis of deafness and vertigo of middle-ear origin. Treatment had consisted chiefly in catheterization, but the condition had grown steadily worse.

The author first saw her on January 5, 1911. The history at this time dated back two years when, following a cold, there came on a progressing deafness, with some tinnitus. Vertigo had commenced nine months previous to the examination, and had increased in severity until she could with difficulty maintain her equilibrium when walking. On stooping or looking down, there was severe dizziness with a sensation of pitching forward. A careful general examination showed her to be a healthy, normal woman. The functional and labyrinthine tests, and the otoscopic findings, all apparently confirmed the original diagnosis of a catarrhal middle-ear trouble. The nose and throat appeared normal. Catheterization produced a bulging of the drum without relief from the dizziness.

The naso-pharyngoscope was now introduced and a peculiar condition was found. "The right Eustachian tube was moderately swollen and injected, but apparently showed normal movements during deglutition. The left tube was much swollen, the blood vessels were dilated and there was much restriction of the movements in the floor of the tube during deglutition. The posterior boundary of Rosenmueller's fossa was in contact with the cushion of the Eustachian tube, but there were no adhesions between them." Applications of argyrol (15-20 per cent) were made within the tubes every other day under the guidance of the naso-pharyngoscope, in the hope that the local inflammation might be relieved. After the fourth application, not only was this hope realized, but the patient felt better than she had for nine months. After ten days, the vertigo was gone, stooping down gave no embarrassment, the tubal swelling was much reduced, and both drums had lost their marked retraction. The treatment was continued two months before the tubes appeared entirely normal; at the end of which time, the ability to hear the whispered voice had increased from four to ten feet, and the other tests showed a proportional improvement.

In concluding, the author does not offer the pharyngoscope as a "cure-all" for every form of tubal inflammation, but claims that it makes pos-

sible the same treatment of these cases under the direct guidance of the eye. Instrumentation can be carefully controlled, and medication can be applied without traumatism, direct to the involved part. This, he says, "is a great step forward, and will make possible the achievement of results impossible under previous methods."

BERRY (MOSHER).

2088

Examination and Treatment of the Eustachian Tube by the Aid of the Naso-pharyngoscope. E. M. HOLMES, *Ann. of Otol. Rhinol. and Laryngol.*, p. 513, Sept., 1911.

Abstracted in THE LARYNGOSCOPE, p. 289, March, 1912.

2089

Report of Eleven Cases Operated Upon by the Yankauer Method for Closure of the Eustachian Tube. S. McCULLAGH.

Original contribution to THE LARYNGOSCOPE, p. 986, Oct., 1911.

2090

Accidents and Injuries in the Treatment of the Eustachian Tube. WALTER E. MURPHY, *Lancet-Clinic*, p. 619, Dec. 16, 1911.

The use of Hays pharyngoscope and Yankauer's speculum has enabled us to study more intimately the region about the fossa of Rosenmueller. The knowledge obtained is essential to rational study of the pathology of the tube and the treatment thereof.

The author has laid particular stress upon the conditions resulting in stricture about the isthmus, the part most frequently involved and least amenable to treatment. He has reviewed the reports of some of the accidents of others and reports several cases coming under his own observation and mentions the dangers to be encountered while treating the tube both in the pharyngeal and tympanic portions.

A. A.

2091

Significance of Treating Eustachian Tube in Chronic and Recurring Otorrhea. E. URBANTSCHITSCH, *Ztschr. f. Ohrenh. u. Krankh. d. Luftw.*, Bd. 63, Heft 1, p. 140, 1911.

In this article Urbantschitsch criticizes an article of Preobraschenski and claims right of priority to all the conclusions the latter has reached.

ED.

2092

The Pharyngeal Orifice of the Eustachian Tube with Demonstration of a Speculum and Other Instruments for Direct Treatment Thereof. S. YANKAUER, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 361, 1911.

Abstracted in THE LARYNGOSCOPE, p. 287, March, 1912.

2095

On the Possible Effect Upon the Auditory Labyrinth of the Ehrlich-Hata Remedy in the Treatment of Syphilis. G. ALEXANDER, *Boston Med. and Surg. Jour.*, March 9, 1911, and *Ann. of Otol., Rhinol. and Laryngol.*, p. 441, June, 1911.

Following the report of Prof. Finger upon three cases of syphilis in which there appeared peculiar and somewhat serious symptoms in the organs of hearing, Prof. G. Alexander reports his observations upon syphilitic aural disease before and after using salvarsan.

In six years previous to the advent of salvarsan he observed sixty-eight cases of syphilis of the ear, and in twelve cases symptoms appeared in the early stages. In one case, disturbance developed after thirteen weeks. In no other case did disturbance of the ear appear earlier than the fourth, fifth, or sixth months. Prof. Finger reports one case of six weeks' duration, another of two or three months. As regards severity, five cases only developed symptoms as serious as those in Prof. Finger's cases. One of these was treated with atoxyl, the other with mercury.

In six years, therefore, Prof. Alexander, with a much larger material, saw only one more case with vestibular symptoms than did Prof. Finger with his salvarsan-treated material in six months. He concludes that the cases of Prof. Finger must have an etiological relation to the salvarsan treatment.

In his own observation of seventy-two patients treated with salvarsan, symptoms of aural disease appeared in only one. (History of case is given). From his work upon the subject, Prof. Alexander concludes that there is some danger of making the condition worse in every case in which, at the time of the salvarsan injection, there is already present disease of the auditory nerve, syphilitic or otherwise. It is not to be expected that a previously sound auditory nerve will be destroyed by the injection.

An unfavorable action is to be feared whenever the auditory nerve is previously diseased. Caution should be used in cases of acute syphilitic disease of the auditory nerve. Caution also in the presence of acute or chronic disease of the auditory nerve in cases of recent syphilis. An unfavorable influence is to be feared in cases of acute syphilis affection of the auditory nerve in old cases of syphilis or latent chronic syphilis.

In hereditary syphilis in the presence of acute manifestations of trouble with the auditory nerve it is better to wait. On the other hand, there are a large number of cases of ear-disease in which the previously described dangers from the salvarsan injection cannot be considered as dependent upon it.

Finally the Ehrlich-Hata has a good effect in cases of chronic labyrinth disease occurring in chronic syphilis.

RICHARDS.

2096

Recognition of Acute Labyrinthitis. G. ALEXANDER, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 482, 1911.

Case of chronic suppurative otitis media in a tubercular patient upon whom operation was performed because of symptoms of sinus thrombosis; suppurative meningitis and death. Besides the chronic otitis

there was present an acute peri- and endo-labyrinthitis with disturbances in the auditory nerve, acute pachymeningitis in the posterior petrosa, defect in the hair-cells, inflammatory infiltration and purulent atrophy of the stria vascularis, acute infiltration of the branch of the ganglion and of the trunk of the nervus acusticus and profuse hemorrhages along the nerve bundle, fibrinous islands in the ductus and sacculus endolymphaticus and fresh pus in the inner canal as well as in both aqueducts.

Further findings led to the conclusion that the affection was meningeal rather than an otitic labyrinthitis. Ed.

2097

Reflex-excitability of the Labyrinth in the Human New-born. G. ALEXANDER, *Ztschr. f. Sinnesphysiol.*, Bd. 45, p. 153, 1911.

The author reports his observations on the new-born and the infant with positive, i. e., normal reflex-excitability, with negative, i. e., abnormal reflex-excitability of the labyrinth, and upon observations of this reflex in those prematurely born. The ages of the infants varied from one hour to eight days. The author used a turning chair, limiting the speed to about one second for a turn. In ninety-two awake infants, after ten turns, a decided nystagmus was observable which, in respect to the intensity and frequency of the movements, and to a certain extent as to their length of endurance, resembled that in the adult. In cases of abnormal reflex-excitability, a normal nystagmus reaction was obtainable if, during the first turns, the exciting causes were emphasized. The majority of those prematurely born have an abnormal reflex-excitability of the semi-circular canals. The author was able to obtain a reflex-nystagmus even in a six-months-child. Ed.

2098

Differential Diagnosis Between the Diseases of Trade and Accidental Affections of the Labyrinth. F. ALT, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 500, 1911.

From a series of investigations, Alt concludes that deafness due to the various trades develops gradually, the rapidity depending on the particular trade. In boiler-makers the symptoms develop from the eighteenth to the twenty-third year; in smiths during the thirtieth year, in lead-workers not until the fiftieth year. Continual shaking of the floor—as occurs in the hammering trades—is responsible for the earlier age at which the labyrinthine disease develops in those thus employed. Again, those employed in closed work-shops are earlier affected than those out in the open. Deafness due to trade is bilateral and usually uniform, while that due to trauma of the middle-ear is usually a unilateral affection. In the 120 patients examined by the author because of their "trade deafness," tinnitus was present but sixteen times. In deafness due to accident, tinnitus is present in three-fourths of the cases. Another distinction is that in the former cases the vestibular apparatus is but very seldom affected, while in the latter cases vestibular symptoms are almost always noticeable, usually complicated with severe deafness. Sometimes the equilibrium disturbances last over a period of several years. Ed.

2099

Diffuse Suppurative Labyrinthitis; Its Diagnosis and its Relation to Endo-cranial Complications. L. AUERBACH, *N. Y. Med. Jour.*, p. 1323, Dec. 30, 1911.

A brief clinical consideration of diffuse suppurative labyrinthitis is here presented. It is characterized by the following symptoms: Spontaneous nystagmus; dizziness; disturbance of equilibrium; disturbance of vestibular irritability; disturbance of hearing. The author presents points in differentially diagnosing this disease from the various types of nystagmus and dizziness, cerebellar abscess and meningitis. GOLDSTEIN.

2103

Ear Conditions in Syphilitics After Administration of Salvarsan. O.

BECK, *Muench. med. Wchnschr.*, Jan. 17, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 853, Aug., 1911.

2106

Vertigo and Disturbances of the Equilibrium in Recent Secondary Syphilis. O. BECK.

Original contribution to *THE LARYNGOSCOPE*, p. 1056, Nov., 1911.

2107

Consideration of the Mechanism of Pressure in Production of Vertigo and Report of Cases. C. J. BLAKE.

Original contribution to *THE LARYNGOSCOPE*, p. 923, Sept., 1911.

2108

Case of Acute Labyrinthine Infection Secondary to Acute Middle-ear Suppuration. A. BLOHMKE, *Ztschr. f. Ohrenh. u. Krankh. d. Luftw.*, Bd. 64, Heft 1, p. 14, 1911.

On a patient, 35 years of age, paracentesis was performed for acute suppuration of the right middle ear. Refuses to be admitted into the clinic. Drives home. On the third day, dizziness and general malaise developed. Patient drives home again. Next day pronounced nystagmus to the left, with typical acoustic and general symptoms of right acute labyrinthine suppuration. Antrotomy was performed to drain the pus from the middle ear and let the labyrinthine condition become encapsulated. Soon, however, marked symptoms of basal meningitis developed and the patient died.

Histological examination: The bony canal leading to the round window is quite filled with pus. The membrane of the round window is replaced by a fibrous network, in the folds of which there are imbedded large quantities of pus and red blood corpuscles. The space between the two limbs of the stapes is filled with pus and blood. At a destructed portion of the annular ligament, the base of the stapes is somewhat dislocated; into the gape thus formed a dense mass of pus-corpuscles is impacted. The cochlea is perfectly filled with pus. The cells of Corti's organ are pushed together irregularly and enormously swollen. Vestibulum and semi-circular canals are densely filled with pus.

The writer believes that the pus invaded the inner ear by way of the round window and returned into the middle ear through the gape at the oval window. The infection of the meninges took place either through the porus acusticus internus per contiguitatem or by metastasis. An abstract of the literature on the subject is added. GLOGAU.

2110

Early Forms of Otosclerosis. E. P. BONCOUR, *Arch. f. Ohrenh.*, Bd. 85, Hett 1-2, p. 21, 1911.

There were three distinct periods in the development of the knowledge of otosclerosis: The first in which no definite diagnosis could be made and in which chronic catarrhal adhesive and residual processes were confused with it. The second in which the regular symptom-complex analyzed by Politzer and confirmed by Siebenmann, Habermann and Bezold, was found to occur due to changes in the ossicles. The third period in which anatomical and clinical findings led to the conclusion that otosclerosis was not the result of primary disease in the sound-conducting apparatus. The author reports two cases in step-brothers, one a boy of 12 years and the other one of 14 years. Both showed the typical otosclerotic symptom-complex. Functional tests pointed to disease of the sound-conducting apparatus. From observations on these cases, Boncour concludes that even the hereditary degenerative forms of otosclerosis begin as a primary disease of the sound-perceiving apparatus. The view that otosclerosis occurs simultaneously with changes in the sound perceiving and sound-conducting apparatus or that it is a disease directly resulting from these, is incorrect. ED.

2117

Otosclerosis. G. BRUEHL, *Arch. internat. de Laryngol.*, p. 1, Jan., 1911, and *Jour. of Laryngol., Rhinol. and Otol.*, p. 294, June, 1911.

After having examined, histologically, eight temporal bones in cases clinically diagnosed as otosclerosis, Bruehl does not agree with some authors who believed the first and fundamental lesion to be, in this sort of disease, a labyrinthine atrophy. He has no doubt that there is a great difference between the cases of stapes ankylosis and those of nervous deafness. In the former we find a normal condition of the tympanic membrane and wideness of the tube as the lower limit of sounds is higher up than usually; furthermore, the Gellé test is negative. In case of nervous deafness, the upper limit of sounds is lowered, the inferior is normal; Rinné and Gellé tests are positive. In some cases, both lesions may be associated, and then an ascension of the lower limit, as well as negative Rinné and Gellé tests will have to be considered as the typical signs of stapes ankylosis. MUNCH.

2123

Unusual Case of Hereditary Syphilitic Labyrinthitis Presenting Hennebert's Syndrome. BUYS, *Arch. internat. de Laryngol.*, July, 1911, and *Jour. med. de Brux.*, No. 28, July 13, 1911.

Buys reports his observations in a case of hereditary syphilitic labyrinthitis presenting the following peculiar features: (1) Entire re-

sistance to salvarsan therapy; (2) independent cochlear and vestibular lesions; (3) decrease in the upper range of hearing on the left ear as tested by the acoumeter. This case is similar to those described by Hennebert, which were characterized by eye-movements in a direction determined by rarefying or compressing the air in the auditory canal, with complete absence of nystagmus during rotation. Hennebert considers pneumatic reaction the last vestige of vestibular reactions in those suffering from hereditary syphilis. In Buy's case a slight thermic and electrical reaction was perceptible. Ed.

2124

Symptomatology of Indirect Traumatic Labyrinthine Lesions. BUYS, *Presse Oto-Laryngol. Belge*, No. 3, 1911, *Arch. internat. de Laryngol.*, May, 1911, and *Arch. ital. di Otol.*, Sept., 1911.

Buy's emphasizes the necessity of examining separately the cochlear and vestibular apparatus in patients suffering from trauma and showing doubtful labyrinthine symptoms. The need for this caution is that trauma may cause simple nervous disturbances (traumatic neuroses) or cerebellar disturbances which can only be differentiated after a thorough knowledge of the symptomatology of labyrinthine lesions. Then, too, traumatic injury of the inner-ear does not always completely inhibit the cochlear and vestibular functions. Ed.

2126

Salvarsan and the Acoustic Nerve. J. DAVID, *Presse Med.*, July 22, 1911.

David reports a case in which the administration of salvarsan was attended with excellent results as far as the systemic condition was concerned, but in which aural symptoms, vertigo, etc. resulted. Ehrlich has recognized this effect and explains it by stating that some of the spirochaete become isolated in the eighth pair of nerves and thus escape the specific action of the drug. David contradicts this theory and asserts that the untoward results are due to oxidation products. He states that arsenic is found in the spleen, liver, kidneys and muscles as late as three months after the injection of salvarsan and that while in these organs the drug may acquire properties injurious to the eighth nerve. In another case cited by the author "606" caused labyrinthine disorder which was partially relieved by the use of pilocarpine. Ed.

2127

Differential Diagnosis Between Pyolabyrinthitis and Cerebellar Abscess.

DE STELLA, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, Sept.-Dec., 1911, and *Bull. d'Oto-Rhino-Laryngol.*, p. 244, Oct. 1, 1911.

Though it may be fairly easy to diagnose a case of cerebellum abscess which exists merely as a complication of suppurative otitis media, the diagnosis is difficult when the labyrinth is involved, due to the fact that the clinical picture becomes complicated by the double symptoms. The vestibular apparatus and the cerebellum preside over the equilibrium and co-ordination of our movements. * * * They have their respective roles; but, on the other hand, they are intimately related, and

injuries to either have effects on both, so that at first sight it would seem impossible to determine which is the organ injured. The reflex phenomena caused by the injury—vertigo, ocular nystagmus, vomiting—differ, however, according to the organ involved." The author discusses in detail the symptomatology of uncomplicated pyo-labyrinthitis and of uncomplicated cerebellar abscess, the method of examining the posterior labyrinth (nystagmus and vertigo), the general symptom of cerebellar abscess (headache, stiffness of neck, vomiting), and the symptoms which aid in differentiating between labyrinthine and cerebellar abscess. The clinical histories of two cases are reported. Ed.

2128

Electric Stimuli in Vertigo from Disease of the Internal Ear. F. DYREN-FURTH, *Deut. med. Wchnschr.*, April 30, 1911.
Abstracted in *THE LARYNGOSCOPE*, p. 80, Jan., 1912.

2129

Salvarsan and Labyrinthine Troubles. FELIX, *Presse Med.*, Aug. 5, 1911.
Felix carefully considers much of the literature on aural disorders following syphilitic infection, with or without administration of "606." He states that the ear should always be examined before injecting salvarsan and that this therapy is contra-indicated where there is any aural inflammation or disorder; in cases in which the patient's occupation predisposes to acoustic disorder; and in cases in which arsenic has been previously given. On the other hand, he reviews many cases in which serious aural trouble developed one to nine weeks after the primary lesion, where no salvarsan had been used,—cases which occurred long before the discovery of salvarsan. Ed.

2133

Serous Labyrinthitis. J. R. FLETCHER, *Jour. A. M. A.*, p. 271, July 22, 1911.

Fletcher considers the differentiating symptoms between diffuse hyperemic serous and suppurative labyrinthitis and diffuse hemorrhage into the labyrinth. He details their common symptoms, their differentiating points and their respective prognoses. Ed.

2134

Occurrence of Diseases of the Internal Ear in the Early Stages of Syphilis. H. FREY, *Wt. klin. Wchnschr.*, March 16, 1911.

Thirty-five cases are cited in which serious auditory symptoms developed a short time after the syphilitic eruption. The author even refers to Roosa's case in 1876. These instances, he feels, should be borne in mind by those who state that so many ear complications result after the injection of salvarsan. Ed.

2136

Review of Recent Literature on Otosclerosis. E. FROESCHEL, *Intern. Zentrbl. f. Ohrenh.*, March-April, 1911.

Froeschels urges the importance of continued observation and investigation into a subject which is commanding universal interest among

otologists. The otosclerosis usually begins during adolescence, and is more common in women than in men, and progresses with increasing impairment of hearing accompanied by annoying subjective tinnitus, and occurs, in the great majority of cases, in both ears but not simultaneously. In the typical form of the disease the drumhead exhibits no indication of catarrhal condition of the tympanopharyngeal tube and tympanum, nor evidence of adhesive process in the middle ear; not infrequently there is a roseate glow in the lower portion of the drumhead referable to injection of blood vessels on the promontory. In the early stage of the disease the tuning-fork tests indicate plainly the obstruction to sound transmission in the middle-ear sound transmitting apparatus, in the later stage the duration of hearing of the tuning fork by bone conduction is shortened and the hearing for high tones decreased, symptoms indicative of the secondary labyrinth implication; in this stage, also, dizziness is a not infrequent symptom, and occasionally vertigo, severe and of sudden onset. The principal localized abnormality is the bony ankylosis of the stapes and, in the majority of cases, osseous new growth on the promontory, and, according to some observers, some other portions of the petrous process. Habermann regards the tympanic mucosa as the starting point of the proliferous process, but Politzer, Siebemann, and many others hold that in the typical otosclerosis the tympanic mucosa is uniformly normal. Under favorable hygienic conditions the otosclerosis often remains stationary for considerable periods, growing rapidly worse, however, under the influence of excessive demands upon the nervous strength, as, for instance, during gestation. The disease is one but little amenable to treatment except in so far as general hygiene and moderate mobilization and moderate stimulation of the intratympanic circulation are concerned. The paracusis Willisii, which is not an infrequent accompaniment of this disorder, as of other disturbances in which stapes ankylosis is an important factor, is explained by Urbantschitsch on the basis of an increased excitation of the auditory nerve, and by Politzer under the more tenable hypothesis of the increase in mobility of the stapes, and other portions of the sound-transmitting apparatus under the influence of the larger sound waves. The etiology of the disease is as yet undetermined. Among French authorities the distinction between the catarrhal processes in the middle ear and the changes characteristic of the disease in question is not clearly marked. Politzer, Siebemann, and some others regard it as a disease entirely independent, in its origin, of the tympanic mucosa, but originating in the labyrinth capsule itself with later implication of the tympanic contents. That heredity is an important factor has been noted by many observers, and especially by Hammerschlagg (*Monatschr. f. Ohrenheilkunde*, 910, p. 709), who gives the report of families in which congenital deafness and otosclerosis were repeatedly exhibited. The discovery of the Wassermann reaction led to a series of investigations as to the possible relationship between otosclerosis and syphilis, but the sufficiently extensive investigation of Busch, Zange, Arzt, and Oscar Beck in regard to this matter have definitely pronounced against any such causative relationship.—*Ex.*

2137

Response to the Tickling Symptoms in Otosclerosis. E. FROESCHEL, *Pas-sows. Beitr.*, Bd. 5, Heft 3, p. 199, 1911.

Except in meningeal or congenital deafness in otosclerotics Froeschel has always found that the sense of tickling in the external auditory canal decreased with the decrease in hearing. The test is made with an Eustachian bougie. Just as the deafness is unequal in respect to both ears, so the tickling response varies; the difference in response has been found to be due to the effect produced on the branches of the trigeminus.

Ed.

2140

Auricular Accidents in the Treatment of Syphilis with Organic Arsenic Products. GAUCHER and GUGGENHEIM, *Presse Med.*, June 17, 1911.

According to the observations of these authors, salvarsan alone, of all the organic arsenic preparations, does not generally cause subjective and objective aural symptoms. The cochlear branch of the auditory nerve is the one most frequently affected, though vestibular manifestations are present at times. The patient presents a uni- or bilateral deafness, tinnitus, deficient conduction, decreased hearing-power, vertigo and at times an otitis interna.

Ed.

2146

Injury to Ear, Due to Organic Arseno-products, During Treatment for Syphilis. H. GRANCHER and H. GUGGENHEIM, *Presse Med.*, June 17, 1911.

Since 1910 aural complications have been observed in syphilitics to whom arseno-benzol was administered. From a study of the data the following becomes evident: The symptoms usually become manifest during the first month following the injection of "606." The cochlear branch is usually the only one affected although at times a vestibular, optic or facial neuritis or otitis media has been found.

The symptoms suddenly become less severe after having remained stationary for weeks or months, but a normal condition is never again attained. Due to the rarity of auditory affections complicating syphilis, those due to "606" seem very numerous. Auditory disturbances due to syphilis occur always in the tertiary or toward the end of the secondary stage; those due to salvarsan arise usually in the secondary period.

Ed.

2152

Case of Re-infection of Labyrinth After Labyrinthotomy. G. HICQUET, *La Policlin.*, July 15, 1911.

Cholesteatoma on the right side. Upon "evidement" the author found a fistula of the horizontal semi-circular canal, while the osseous capsule was carious. Partial labyrinthotomy. Recovery, but after twenty-eight days there were signs of hyper-excitability in the right labyrinth with suppuration, intense vertigo and violent cephalalgia. Total posterior labyrinthectomy; normal sinus and meninges. Recovery. The author urges that labyrinthotomy is an incomplete operation, for by this method the path is nevertheless left open for ultimate infection.

Ed.

2154**Syphilis of the Labyrinth in the Early Stages of the Secondary Period.**HINTZE, *Muench. med. Wchnschr.*, May 30, 1911.

Hintze reports a case which was under his treatment for some time for syphilis. Six weeks after a short mercurial treatment for an infection, developed seven months previously, unilateral facial paralysis and ptosis became apparent. This again disappeared after further anti-syphilitic treatment. But in the course of two months, serious labyrinthine symptoms developed which were again relieved under mercurial therapy. The eventual results of the tinnitus and deafness, the author cannot report, owing to the patient's removal from the city. Hintze states that labyrinthine syphilis occurring in the early stages is not frequent.

Ed.

2156**Case of Diffuse Suppurative Labyrinthine Cerebro-spinal Meningitis Successfully Operated.**G. HOLMGREN, *Nordiskt Med. Ark.*, No. 29, 1911.

Woman, aged 65 years, having chronic suppurative otitis media and cholesteatoma, and severe vertigo since the last three months. Total deafness, absence of vestibular reflexes; therefore a diagnosis of diffuse suppurative labyrinthitis was made. Hinsberg's labyrinth-operation. Ten days later high fever and intense headache. Lumbar puncture; turbid, numerous polynuclear leucocytes and diplococci. Neumann's labyrinth-operation; abscess, the size of a hazel-nut found between dura and bone in the region of the saccus endo-lymphaticus; incision of the dura at the porus acusticus internus resulting in the profuse flow of a turbid-colored cerebro-spinal fluid. Puncture repeated during the next three weeks. Seven weeks after the second intervention the patient was cured.

Ed.

2158**Sequestrum of Labyrinth.** F. T. HOPKINS, *Am. Jour. of Obstetr.*, June, 1911.

This sequestrum shows the semicircular canals, cochlea, aqueductus Fallopii, and internal auditory canal. It has at its inner extremity a groove which formed a part of the bony canal of the carotid artery. The interest lies in the completeness of the sequestrum, the recovery of the patient and the bearing which the functional symptoms have on the question of labyrinthine suppuration.

GOLDSTEIN.

2163**Clinical Studies of Five Cases of Suppurative Labyrinthitis.** P. D. KERRISON.Original contribution to *THE LARYNGOSCOPE*, p. 161, March, 1911.**2164****Vertigo of Vestibular Paralysis.** P. D. KERRISON.Original contribution to *THE LARYNGOSCOPE*, p. 978, Oct., 1911.

2165

Bilateral Neuritis Cochlearis in Recurring Lues After Salvarsan. A. KNICK, *Montaschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 4, p. 413, 1911.

A smith, aged 33 years, to whom salvarsan (0.78) was administered because of a popular exanthema. Twelve weeks after this injection (over four months after the infection) bilateral deafness set in during loud bell-tolling. This deafness grew worse for several weeks, was more severe on the right ear, and seemed to be a cochlear affection without participation of the vestibule. The fact that at first the patient could be easily tired by repeated tests and that there was less acuity in the hearing of middle-tones pointed to a retro-labyrinthine seat of the trouble (toxic neuritis). Wassermann reaction always negative. Calomel injection resulted in only a slight improvement in the hearing. After an interval the hearing range slightly increased, spontaneously, while at the same time the tinnitus decreased.

The author remarks that the occupation of the patient could not have caused the cochlear affection, since he was not employed at the time; nor does he attribute it to the syphilitic infection,—for in the primary stage bilateral cochlear symptoms have never yet been observed. Therefore the author concludes that the trouble was caused by the direct toxic influence of the arsenobenzol. Of course the author admits that a predisposition to the deafness may have existed—possibly there had even been some trauma due to the occupation of the patient, and to excessive use of tobacco and alcohol. Consequently one should always carefully consider such predispositions before administering "606." Ed.

2169

Ten Cases of Operation for Meniere's Disease, Aural Vertigo. R. LAKE, *Lancet*, June 10, 1911.

Lake considers only cases of aural vertigo; for true Meniere's disease he holds that there is no cure. In treating aural vertigo Lake performs a vestibulotomy, thoroughly cleaning out the vestibule. His results have been very satisfactory. Ed.

2170

Histological Proof of Empyema of the Saccus Endolymphaticus. W. LANGE, *Passows Beitr.*, Bd. 4, Heft 3, p. 191, 1911.

Lange reports this case to illustrate that microscopical findings do not suffice for the diagnosis of saccus empyema, but that a histological examination must also be made. In this instance there was present a total labyrinthine necrosis; residua of previous inflammations apparent in labyrinth. The infection traveled through the necrotic endo-lymphatic duct and formed in an epi- and intra-dural abscess in the apertura externa of the aquae ductus vestibuli. Empyema of the whole saccus was not, however, present. Lange points out that the saccus may merely play a side role during the formation of an intra- and epidural abscess due to transmission of the infection through the aquaeduct. Ed.

2178

Galvanic Nystagmus. H. MARK, *Ztschr. f. Ohrenh.*, Bd. 63, Heft 3, p. 201, 1911; and *Arch. internat. de Laryngol.*, p. 813, Nov.-Dec., 1911.
Abstracted in *THE LARYNGOSCOPE*, p. 112, Feb., 1912.

2181

Diseases of the Auditory Nerve in Acquired Syphilis. O. MAYER, *Wf. med. Wchnsch.*, March 16, 1911.
Abstracted in *THE LARYNGOSCOPE*, p. 945, Sept., 1911.

2182

Histological Study of a Case of Otosclerosis. O. MAYER, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 3, p. 257, 1911.

Man who died at age of 57, was deaf for twenty-one years. Had frequent attacks of giddiness and tinnitus. His mother had also been deaf for twenty-three years before her death. In the case of the man death was attributed to pulmonary edema, dilatation and fatty degeneration of the heart, chronic enlargement of the spleen and general anemia. Mayer gives a detailed account of the histological aural findings. Ed.

2185

Otosclerosis and Other Forms of Chronic Progressive Deafness. JORGEN MOELLER, *Hygiea*, p. 203, 1911.

A full discussion of the problems of the different forms of chronic progressive deafness. A short analysis is impossible. HALD.

2186

Neuritis Acustica Alcoholica. K. MORIAN, *Passows. Beitr.*, Bd. 4, Heft 3-4, p. 257, 1911.

Morian reviews six recorded and five personally observed cases of alcoholic neuritis of the auditory nerve. The patients were all men, whose ages ranged from 30 to 50 years. The initial symptoms were acute deafness developing in either a few hours or during several days, loud subjective noises; in three cases also rotary nystagmus. Hearing tests usually revealed a bilateral deafness for spoken words, absence or reduction in bone conduction, Rinne positive, if the tuning fork could be heard at all the hearing range was normal, or both the upper and lower ranges were misplaced, no tone islands. In two cases submitted to the caloric test, there were symptoms of intense vestibular irritation, which could with difficulty be differentiated from labyrinthine disease. The prognosis is always doubtful; in three cases complete recovery set in; in three the deafness could only be arrested; in three instances the disturbance grew worse. One of the first and most urgent requisites for recovery is total abstinence from alcoholics. Ed.

2187

Infectious Labyrinthine Disease. H. NEUMANN, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 572, 1911.

Neumann's work on the pathology and therapy of infectious labyrinthitis is interesting because of his long and rich experience in this

field. His discussion on its symptomatology and the indications for operation is of especial worth. In this article Neumann discusses for the first time in detail his own labyrinthine operation. Ed.

2190

Coagulation of Lymph in the Semi-circular Canals. D. A. PRENDERGAST, *Cleveland Med. Jour.*, p. 533, June, 1911.

The patient, male, aged 50, has had a discharging left ear since childhood with marked impairment of hearing on that side. There have been occasional attacks of vertigo, the last one occurring a month ago during the course of a slight influenzal infection. In the left ear Shrapnell's membrane was the only portion of the membrane tympani left. There is a slight response to the voice through the speaking tube, but no perception of tuning fork sounds. The temperature test elicited no reaction. In the tuning test, the after-nystagmus is one-third more when patient turned to left than when turned to right. Strong compression and rarefaction in the fistula test, however, caused a slight vertigo with nystagmus to the diseased side. EDGAR (GOLDSTEIN.)

2194

Clinical Studies on the Differential Diagnosis of Labyrinthitis, Meningitis and Cerebellar Abscess. E. RUTTIN, *Monatsch. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 593, 1911.

Apropos of nine very interesting cases Ruttin demonstrates the importance of careful study of the direction, severity and duration of the nystagmus and its relation to the typical labyrinthine forms, as an aid in the diagnosis of cerebellar abscess. If the labyrinthitis and cerebellar abscess exist simultaneously with meningitis and sinus thrombosis a diagnosis becomes difficult. Of the seven cases of cerebellar abscess, five terminated fatally in spite of successful operation; two gave satisfactory results. Ed.

2195

Nystagmus as a Symptom of Erysipelas. ERICH RUTTIN, *Ztschr. f. Ohrenh. u. Krankh. d. Luftw.*, Bd. 64, Heft 1, p. 35, 1911.

The prodromal symptoms of erysipelas, severe headaches, extreme sensitiveness of the head to pressure, high temperature, slight stiffness of the neck may be present before the pathological changes of the skin permit of a diagnosis of post-operative otitic erysipelas and might therefore be mistaken for an intra-cranial complication. The writer describes the nystagmus observed by him in seven cases of post-operative erysipelas and comes to the following conclusions: Spontaneous nystagmus is a frequent symptom of post-operative otitic erysipelas. It is directed to the diseased or healthy side, or both ways, upwards or downwards, with varying intensity. It may occur simultaneously with fever and headache as a prodromal symptom, or when the skin condition is established. It always ceases before or simultaneously with the dropping of the temperature. While it is present only a few days in the beginning of erysipelas, the nystagmus may return with any relapse of the for-

mer. As to the etiology the writer suggests serious labyrinthitis and intracranial complications as probable underlying conditions. GLOGAU.

2200

Report of a Case of Serous Labyrinthitis and Extra-dural Abscess. E. T. SENSENEY.

Original contribution to *THE LARYNGOSCOPE*, p. 692, June, 1911.

2203

Some Cases of Infectious Labyrinthine Affections Originating from Middle-ear. E. STANGENBERG, *Nord. Med. Ark.*, No. 28, 1911.

After reviewing the recent important aids (Barany's) in the diagnosis of labyrinth diseases, Stangenberg reports on ten cases of labyrinthine infection observed within the last two years. Seven of these were circumscribed and three diffuse; a minute description of the clinical histories of each case is given. One case showed symptoms of diffuse meningitis upon its entrance in the hospital and died within a few hours. The others were successfully treated according to the method of the Vienna school. Ed.

2205

Case of Acquired Atrophy of the Cochlear Apparatus in Little's Disease with Renewed Eruption of an Acute Suppurative Otitis Media Into Labyrinth, etc. W. UFFENORDE, *Passows Beitr.*, Bd. 5, Heft 4, p. 274, 1911.

Child of 4, having Little's disease, acquired a lacunar angina. A suppurative otitis media also developed which produced pyemic symptoms. Operation refused; death. Autopsy showed merely general edema of the brain. Special histological examination of the temporal bone disclosed the fact that the middle-ear infection had spread through the round window to the labyrinth, and thence probably to the meninges. Extensive atrophy of organ of Corti. Ed.

2207

Salvarsan and the Auditory Nerve. UMBERT, *Rev. Barcel. de Enferm. de Oido*, Sept. 30, 1911.

Patient received two injections of salvarsan, one of 0.45 and another, ten days later, of 0.55. Pronounced deafness and such intense vertigo that the patient could not walk unassisted; also unbearable fulgurating pains in head, of about three minutes' duration, recurring every two or three hours. Bilateral loss of vestibular and cochlear function. After fourteen days left facial paralysis and also paralysis of the left oculomotorius. Umberto holds that all three symptoms are referable to the salvarsan. Before its use the patient had no auditory disturbances. Possible the age of the patient (57 years) played a role in the development of the disease. In spite of this incident, however, salvarsan is a valuable remedy; the auditory complications following it are but 1:1000. Ed.

2208

Etiology of Functional Exclusion of the Labyrinth in Suppurative Otitis

Media. E. URBANTSCHITSCH, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 621, 1911.

In this article very important and careful histological data is given, obtained from a patient, 57 years old, who suffered from a left aural suppuration for fourteen years. Suddenly high fever, severe pains, nausea and vomiting developed, total deafness on the left side and non-caloric vestibular response; later symptoms of meningitis. Radical operation showed cholesteatomata; the contemplated labyrinth operation was not undertaken because of the weakened condition of the patient. At autopsy a suppurative, fetid meningitis was found and perforation of a nut-size fetid abscess of the left temporal lobe. The absence of labyrinthine function was due to compression of the auditory nerve in the internal canal. The otitis had provoked a temporal lobe abscess from which the suppurative meningitis developed, the latter causing the pus-formation in the internal auditory canal.

Ed.

2210

Otosclerosis; Its Treatment by Re-stimulation of the Auditory Nerve.

VALENTIN, *Nord. med.*, March 1, 1911.

Valentin relates some of the results obtained by this method. The human voice is the most effective method of influencing the ears, impaired by otosclerosis, when the treatment is undertaken in the special manner, detailed by the author. In many of the cases improvement continued even after the treatment ceased.

Ed.

2216

Vestibular Vertigo and a Method of Making an Objective Diagnosis.

WEBER, *Vierteljahrschr. f. Gerichtl. Med. u. oeffentl. Sanitaetsw.*, Folge 41, Heft 2, Sup.-H., 1911.

The Babinski-Mann method of testing for vestibular disturbances is often unsatisfactory and uncertain. To minimize the degree of doubt, Weber has introduced the following method: The person examined is ordered to stand on one leg, leaning with one finger (corresponding to the foot upon which he stands) lightly against a chair. Two electrodes are attached to the ear by means of a rubber band, and a third is placed into the patient's hand. Healthy individuals show no signs of vertigo if an even, though strong, galvanic current be turned against both ears; nor is vertigo apparent in patients having brain concussion and the so called vaso-motor symptom complex. On the other hand, in those having labyrinth disease, especially in those who are not tired, pronounced vertigo is noticed. The author hopes to develop his method further, so as to be able to differentiate the various labyrinthine diseases in this way.

Ed.

2223

The Relation of the Posterior Longitudinal Bundle to the Labyrinthine Ophthalmostatik. ZIBA SHIN-IZI, *Arch. of Otol.*, Nov. 9, 1911.

The author concludes from the examination of the posterior longitudinal bundle in mammals, reptiles, birds and fishes that in the former the posterior longitudinal bundle is poorly developed as certain other reflex paths exist which pass from the cortex of the brain and influence the eye muscle tonus. In the more animated of the other species, that is those which execute finer motions, a closer relationship is seen to exist between the labyrinthine muscle tonus, and the more highly developed posterior longitudinal bundle.

YANKAUER.

2226

The Deaf Child's Home Training. J. S. ANDERSON, *Volta Rev.*, p. 307, Oct., 1911.

Mrs. Anderson gives the outline of work for children of three years. Ten minutes each are given to color work and games. This is followed by a fifteen minutes' sewing of cards. After that a ten-minute period is respectively devoted to lip-reading; paper-folding; marching, dumbbells, and wands; pictures, Old Maid, number, kindergarten gifts and occupations; gymnastics; writing and special sense training; and language and reading.

Ed.

2227

Traumatism of the Head. Right Progressive Unilateral Labyrinthine Deafness. M. ANDRE, *Ann. des Mal. de l'Oreille, du Larynx du Nez et du Pharynx*, p. 23 No. 1, 1911.

Case of man, of 61 years, who fell from a wagon, thus bruising the right side of his head. Unconsciousness for four to five minutes, vertigo toward the right, tinnitus and labyrinthine deafness on the right ear. This deafness increased during the next few months, while the vertigo changed toward the left. After pilocarpin medication the intensity and frequency of the vertigo-spells decreased. The patient was able to raise his head without becoming immediately dizzy, and his walk became more steady.

Ed.

2228

Invention for the Sign-taught Lip-reader. H. U. ANDREW, *Volta Rev.*, p. 392, Dec., 1911.

This invention was evolved from the inventor's necessity, by Mr. E. H. Hatcher, of Kansas City, who is partially deaf and who had some trouble in lip-reading. It consists of a frame and celluloid tape so regulated that the pupil can see the written words gliding across his teacher's lips at the same time that they are uttered. By means of a small mirror placed in the frame the pupil can also practice alone.

Ed.

2232

Disturbances in Hearing and Vision After Administration of Hectine. G. BALLEET AND C. HISCHMANN, *Presse Med.*, Sept. 20, 1911.

In this article the authors report on the untoward effects due to the administration of arsenic to syphilitic patients. The man was 72 years

old and had had syphilis since his twenty-fifth year. During the course of the disease various symptoms manifested themselves, and among other things hectine was administered. After five injections the hearing and sight failed completely; he was very much depressed and did not wish to get out of bed. Hectine was discontinued and strychnin and galvanic electrization instituted. Hearing restored to the stage it was in before the hectine was given, but the vision was not improved. Only one such case has been observed in the course of 3,000 injections of hectine and the authors feel that this case does not warrant discontinuing the medication, but merely indicates that one must be discreet in using it. Ed.

2233

What Improvements Can Rationally be Expected from Treatment of the Nose and Throat in Middle-ear Deafness. J. F. BARNHILL, *Jour. A. M. A.*, p. 553, Aug. 12, 1911.

Diseases of the nose and throat may, according to Barnhill, cause and perpetuate deafness. In the first place, they disturb the air-pressure which should be equal on each side of the tympanic membrane. Some otologists claim that sixty to seventy-five per cent of the cases of deafness may be attributed to adenoids. Though Barnhill was unable to find any but hypertrophied tonsils interfering with hearing, yet he points out the dangers which may result from the infectious material contained in their crypts. All children should be thoroughly examined for nose and throat defects. If their correction be delayed too long, until tissue-changes have occurred, the benefit to be derived from nose and throat treatment becomes almost nil. Ed.

2234

Bilateral Deafness and Vestibular Affections After Salvarsan Injections. O. BECK, *Munch. med. Wchnschr.*, p. 2217, Oct. 17, 1911.

Very often neuro-recidives develops after the administration of salvarsan in leutic. It is uncertain whether the arsenic is wholly responsible for these complications or whether they are due to the leutic conditions themselves, aggravated by the injections. Pilocarpin injections and internal doses of iodine are advised to counteract these symptoms. Ed.

2236

Unfavorable Influence of Pregnancy Upon Chronic Progressive Deafness. S. M. BRICKNER, *Am. Jour. of Obstetr.*, June, 1911.

Brickner feels that too little attention has been given to the influence of pregnancy upon otosclerosis. The pathological processes involved are not clear, but the fact remains that deafness increases immediately upon the advent of pregnancy, grows worse during gestation and remains worse after delivery than it was before the pregnancy began. Repeated pregnancies render the hearing progressively worse. Abortion may preserve the hearing which then exists, but no more; in fact, the hearing usually keeps on deteriorating. If it has been definitely determined that the hearing is diminishing, the author states that the pregnancy should be interrupted. Whether or not such women should be rendered sterile, depends upon the individual case and upon the attitude of the patient. Ed.

2240

Influence of Heredity in Deaf-mutism. J. L. COBB, *Am. Ann. of Deaf*, p. 253, May, 1911.

Cobb discusses the subject of the influence of heredity in a general way. Little new is presented. Ed.

2242

Possibilities of Oral Methods in the Instruction of Deaf Children. A. L. E. CROUTER, *Am. Ann. of the Deaf*, Sept., 1911.

In the training of deaf children, all grades and classes are presented for instruction, the born deaf, the semi-deaf, the semi-mute, the richly endowed, the average mind, and the dull and backward child. The purpose of this paper is to set forth the possibilities of educating all classes of deaf children by purely oral methods.

"After forty-four years of experience with both oral and manual methods, I believe that the oral method affords greater educational possibilities than the manual method. The essence of the oral method is that the deaf child shall receive his language impressions through speech; that he shall get his first conception of language from the expressive face of the teacher, not by translation through signs, not through writing."

Portions of the brain of the deaf man who cannot speak reach an advanced stage of development through the use of ideographic language, but this is, at best, a one-sided development, the motor areas of the brain used in speech remaining dormant and finally becoming atrophied, as was shown by a post-mortem examination of the brain of Laura Bridgman. Baldwin says: "The way of getting to speak by imitation is itself, perhaps, the profoundest pedagogical influence in the child's mental history." It is for the sake of the development that can only be gained in this way that the intelligent teacher chooses the oral method, not for the sake of speech *per se*.

The value of oral methods should not be measured by proficiency in articulation alone, any more than the intelligence of a hearing person should be judged by the quality of his voice. Even if the speech of an orally taught deaf person were absolutely unintelligible, he would still be on a par with one manually taught in his ability to express himself, with the added advantage of having a brain better developed by the mere effort of learning articulation.

Lip reading is the corner-stone of the oral method. But the eye is at best a poor substitute for the ear in the acquisition of language, and unless his time is most wisely economized the deaf child reaches maturity before he has mastered the great task of acquiring a mother tongue. It is a fatal mistake to suppose that he can, until a very advanced stage, dispense with the services of the expert teacher in the acquisition of both written and spoken language.

The pupils usually thought to be unfit for oral methods of teaching are the very ones who need it most. Pupils suffering from vocal malformation and paralysis receive language as readily by this method as those who excel in articulation, and for those of retarded mental development it affords the only means of making language vital.

Of the adventitious deaf (pupils deaf from 2 to 4 years of age), the semi-deaf and the semi-mutes, constituting fully 66 per cent of the school attendance, there are almost no cases of failure to acquire a good, intelligible command of speech and lip reading; while of the others, the born deaf, and those made deaf at 2 and under, fully 34 per cent, instances of complete failure are very rare, not more than two or three in a hundred.

Small classes are an essential factor in determining results in speech and lip reading. In general our classes are too large, numbering as they do from eight to twelve pupils.

WRIGHT.

2243

The Successfully Taught Deaf Child. . A. L. E. CROUTER, *Volta Rev.*, p. 141, June, 1911.

In 1909 Dr. Crouter announced that, after a process of elimination covering twenty-five years, the last of the school's manual classes had been terminated, and that thenceforward each of the more than 500 pupils in attendance was to be educated by speech methods only. Added interest attaches to this statement in view of the circumstance that the school is the largest for the deaf in the world; that its Superintendent has had more than forty years of experience as an educator of the deaf, and that the oral method was not made the exclusive means of instruction until the authorities of the school had put it to the classroom test for a period of twenty-five years.

In his annual report for 1910, Dr. Crouter says: "We do not claim to be able to make orators or public speakers of our pupils, but we do claim to be able to give them a good general education; and, in doing so, to train their powers of speech and lip reading to the extent of enabling them to communicate freely with their relatives and close friends, and to express their thoughts in fairly correct English on all topics of general interest. Except in a comparatively few cases, more than this may not wisely be claimed for any method.

"We have dropped manual methods because we found them unnecessary, and because we believe they interfere with the best progress of our pupils in acquisition of speech and lip reading and in all the regular

"The course of study is so designed that pupils completing it may enter grammar and high schools for the hearing, or special schools and colleges. Of those who graduated in June, two are attending high schools, one is attending the Kansas Agricultural College, and two are pursuing a special art course in the Philadelphia School of Industrial Arts. Others are pursuing trades acquired in our industrial department." WRIGHT.

2245

Consideration of the Pathological Conditions of the Ear Resulting in Profound Impairment of Hearing. E. B. DENCH, *Ann. of Otol. Rhinol. and Laryngol.*, March, 1911.

A profound impairment of hearing may occur at birth or may be the result of some pathological condition occurring after birth. The author dwells on the clinical aspect of the subject.

Inter-marriage of those born deaf is one of the most common causes of congenital deafness. In these instances anatomical anomalies have

been noted. Faulty mental development has also been observed, but it is not found in the majority of these cases. Suppuration of the middle ear may, at times, lead to profound disturbance in the hearing. Labyrinthine hemorrhage is another causative factor. Invasion of the labyrinth secondary to or coincident with middle-ear disease is the most common condition. The author believes that otosclerosis is secondary to the pathological conditions within the tympanic cavity, in a large proportion of the cases.

Dench cites the writings of Denker on "Deaf-mutism." The latter has found that where extensive changes have occurred in the end-organ of the auditory nerve, the nerve-trunk itself has shown some pathologic alterations.

In cerebro-spinal meningitis there are inflammations of the auditory nerve-trunk. In syphilis, the lesion may be in the nerve-trunk or in the labyrinth itself. Some therapeutic suggestions are given. LEDERMAN.

2247

Word-deafness in a Girl Aged Fourteen Years. H. DRINKWATER, *Liverpool Med.-Chir. Jour.*, 1911.

This child was apparently normal until the age of ten when she caught "cold in the head." Progressive deafness developed and at the end of six months she was totally deaf. She could not hear any spoken words but by bone-conduction she could hear a watch tick. After adenoid tissue was removed and her ear inflated the watch could be heard at 12 inches but there was no other improvement. Later she asserted that she could hear words but could not understand nor repeat them. The author feels that this inability to grasp spoken words is due to some defect in the auditory word-centers. Ed.

2251

Auricular Gymnastics in the Treatment of Deafness. FERNET, *Semaine med.*, March 15, 1911.

Fernet has experienced in himself and by teaching others how much may be derived from exercise in the treatment of deafness. Instead of using his normal ear he would turn his defective one and attempt to catch sounds with it. He exercised it also by attempting to hear with it the tick of a clock, gradually moving further away from the clock. In addition to training his acuity of perception he tried to influence the ear-muscles by enlarging the meatus and promoting the circulation. The latter he tried to accomplish by massaging the aural region. In his own case Fernet re-established the permeability of the Eustachian tube leading to his partially deaf ear, thus inducing normal middle-ear ventilation. Ed.

2253

Teaching Speech to the Deaf. G. FERRERI, *Volta Rev.*, p. 225, Sept., 1911.

Ferreri feels that failure in the employment of the oral method is due to the pedantry and exaggerated scrupulousness of the teachers. The earlier the instruction is begun the better. One fact, too, must not be lost sight of, namely that speech is not only an art but also an instinct. Ed.

2256

Disturbances in Hearing Following Gun-shot Wounds. E. P. FRIEDRICH, *Ztschr. f. Ohrenh. u. f. Krankh. d. Luftw.*, Bd. 63, Heft 1, p. 171, 1911.

Friedrich shows that Jaehne has come to the same conclusions he himself has reached. The latter's explanation and conclusions as to the hardness of hearing found in the foot-artillery coincide with his own in regard to the deafness in naval officers. Ed.

2258

Applied Psychology in Teaching the Deaf. A. B. FULLINGTON, *Volta Rev.*, p. 622, Jan., 1911.

In this paper Fullington discusses briefly the factors of inheritance, experience, habit and memory, and how they may be utilized in the training of the little deaf child. Ed.

2262

Practical Value of Lip-reading. M. A. GOLDSTEIN.

Original contribution to *THE LARYNGOSCOPE*, p. 619, May, 1911.

2264

Prevention of Deafness. D. GREENE, *Am. Ann. of Deaf*, p. 213, March, 1911.

Many cases of deafness are due to suppuration of the middle ear following measles, scarlet fever, etc. Such suppuration is usually preceded by the swelling of certain glands of the neck and other external symptoms. If this swelling be discovered in time all serious sequelae can be averted. Especially among the poor more prophylaxis should be exercised. Ed.

2268

Education of Deaf Children. IMHOFFER, *Stimme*, p. 235, May, 1911.

Imhofer urges the necessity of beginning the education of the deaf child before the age of seven. He points out that deferring it leaves the child for many years without psychic stimuli, which retards its development in many respects. One should also discover whether there is not a slight remnant of hearing-power, and if so cultivate it early. Ed.

2270

Internal Ear Deafness as a Complication of Mumps with Special References to Pilocarpin Treatment. J. A. JONES, *Med. Chronicle*, p. 207, July, 1911.

This condition was more common years ago. At present this complication is rare. The case reported by the author is that of a child of 8 years, who became deaf while recovering from the mumps. Jones saw the patient three days after the onset of the deafness (nine days after the onset of the mumps). Vertigo; no tinnitus nor nystagmus; middle ear unaffected. Subcutaneous injections of pilocarpin were administered for three weeks. On the fifth day the vertigo disappeared, but not the deafness. Pilocarpin and quinin orally were given for two weeks; then strychnin. The latter without avail. In this case the condition was bilateral; permanent total deafness resulted. Ed.

2271

How Best to Prepare the Deaf for Life. J. W. JONES, *Am. Ann. of the Deaf*, p. 378, Sept., 1911.

Jones urges the very careful selection of teachers for the deaf child and also a manual training in preference to an industrial one. Ed.

2279

Medical Inspection of School-children with Special Reference to the Medical Inspection of Deaf Children. J. K. LOVE, *Volta Rev.*, p. 332, Nov., 1911.

This is an abstract of a paper read to the seventh biennial conference of British Teachers of the Deaf. Ed.

2280

Education of the Very Young Deaf Child. J. K. LOVE, *Volta Rev.*, p. 602, Jan., 1911.

Love points out that the center of interest is shifting from the school-room to the nursery and that the efficacy of the oral method really depends upon the time that instruction is begun. The special education of the little deaf child must be undertaken as soon as his deafness is ascertained. During the first five years of life—the period of language- and speech-formation—his mind must not be left in utter darkness, so that at seven years he is unequal in many respects to the hearing child of two years.

There are two means of attaining this end: (a) by founding nursery schools or (b) by having articulation-teachers visit the homes of the very young deaf children and instruct both parent and child; Love prefers the latter method, for he feels the mother thus learns better how to care for the child. However, either method will help to develop "nascent speech instincts at the time when that development is easiest and most natural." Ed.

2282

Medico-educational Problem of the Deaf Child. G. HUDSON-MAKUEN.

Original contribution to *THE LARYNGOSCOPE*, p. 683, June, 1911.

2283

Syllabus for a Lecture to Medical Students on the Deaf Child. G. HUDSON-MAKUEN.

Original contribution to *THE LARYNGOSCOPE*, p. 1070, Nov., 1911.

2285

Some Types of Deaf Children and What May be Done for Them in the Public Schools. MARY McCOWEN, *Am. Annals of the Deaf*, March, 1911.

The difficulty of the educational process with the otherwise normal, congenitally deaf child depends upon the age at which he is given language. Before deafness is discovered in a babe, every member of his family habitually speaks to him, knowing very well, although they may never stop to think of it, that, to begin with, the babe does not under-

stand a word. But, believing that he hears, they continue to use speech with him incessantly. However, when once the fact of deafness is established, everyone suddenly ceases talking to him, "because he does not understand," and the deaf babe who could learn to understand speech through seeing it constantly used is thereby deprived of this opportunity. If, instead of talking less, or none, to the babe found to be deaf, the opposite course be pursued; if everyone interested in him seeks opportunities to speak to him more often even than to the hearing babe, more simply at first, but never in "baby talk," and always very plainly, but never exaggerating speech positions of the mouth, he will slowly and surely come to understand in definite words.

One group of children generally misunderstood is made up of those not entirely deaf. Dr. Crouter of Pennsylvania says "A slight degree of deafness which would not greatly inconvenience an adult, seriously hampers the development of the growing brain of a child." The imperfect hearing of the child should receive training for its development and special educational attention.

Another group is composed of those children who have become deaf after learning to speak. When this occurs under eight years of age, a complete loss of speech is not uncommon, and some loss and deterioration can only be prevented by the most prompt and skillful work of a trained teacher. The teaching of speech reading from the lips should begin at once.

Under present conditions, many of the deaf become expert craftsmen and rise to positions of authority in their chosen calling. There are deaf printers, chemists, deaf foremen in factories, deaf directors of more or less intricate commercial enterprises, deaf inventors, artists, engravers, sculptors, architects, contractors, lawyers, bankers, etc. Indeed, few occupations are now closed to the deaf, except as they are also closed to the hearing man who lacks the intelligence or education necessary for success in that particular line of work.

In this country at the present time one or more public boarding schools for the deaf are maintained at public expense in almost every State in the Union, and in certain States, day schools for the deaf are also in operation as a part of the regular public school system.

WRIGHT.

2294

Educating the Eye to Substitute for Deaf Ears. E. B. NITCHIE, *Ann. of Otol., Rhinol. and Laryngol.*, p. 74, March, 1911.

The problem of teaching lip reading is a psychologic problem. Both the eyes and the mind must be trained, but mind-training is the more important factor.

The difficulties for the eyes to overcome are two: First, the obscurity of many of the movements, and second, the rapidity of their formation. From $\frac{1}{2}$ to $\frac{1}{13}$ of a second is the average time per movement in ordinary speech. This is the average, but some movements are, of course, slower, while others, particularly those for unaccented syllables, are much quicker.

The method should aim first always to study or see the movements in words or sentences, not formed singly by themselves. Sounds pronounced singly always tend to be exaggerated, and many of them even to be grossly mispronounced.

In the second place, the method should aim always to study or see the movements as the words are pronounced quickly.

And in the third place, the method should aim to inculcate a nearly infallible accuracy and quickness of perception of the easier movements, leaving to the mind in large measure the task of supplying the harder movements.

The method of mind-training should aim to develop the power of grasping thoughts as wholes, and to avoid strictly anything that will enhance the opposite tendency of demanding verbal accuracy before anything is understood at all. There are many minds of the latter type; they are literal, analytical, unimaginative. Yet there are very few who are altogether of this kind; most of us, however analytical, have some synthetic powers, some ability of putting things together, of constructing the whole from the parts, of quick intuitions. It is by developing these powers that real success in lip-reading can be attained.

What degree of skill can a lip-reader expect to attain? And how long does it take? What some can attain in three months others cannot acquire in less than a year; and the highest degree of skill, as in any art, is open only to the few. But three lessons a week for three months will with most pupils give a very satisfactory and practical skill.

With very few exceptions, such a degree of skill is possible to everyone as to make home and social friendships a joy once more, and though it may not be an infallible resource in business, it may for all be an invaluable aid.

Two objections to lip-reading I occasionally hear from physicians: (1) That it is too great a strain on the eyes; and (2) that by relieving the ears from hearing, there is a tendency to deterioration from lack of exercise.

The strain upon the eyes at first is truly no small one. But I have repeatedly found that those who complain of eye-strain during their first lessons, later never think any more about it. The objection in regard to the deterioration of hearing I believe to be the reverse of true. Dr. Albert Barnes, in *The Dietetic and Hygienic Gazette*, October, 1910, said: "People with ear-strain should spare the hearing as much as possible, and instead of straining the ear to catch what is said they should watch the lips more. In other words, the eyes should be called upon to help the ears."

WRIGHT.

2298

Some Early Books on the Education of the Deaf. F. R. PACKARD.
Original contribution to *THE LARYNGOSCOPE*, p. 1065, Nov., 1911.

2300

Father Azemar, the de l'Epee of the East. Y. PITROIS, *Volta Rev.*, p. 394, Dec., 1911.

Father Azemar was a missionary priest sent by the Roman Catholic Church of France to Lai-thieu. Near his home in China there lived a

little deaf boy, who aroused his pity because of his loneliness and isolation. At his own expense he sent the boy to a school for the deaf in France. When his protege returned they together opened a school for the deaf in Annam and devoted the rest of his life to this cause. During the last six months of his life he found a zealous helper in Father Verney, another French missionary, who took the work in hand upon the death of Father Azemar.

The mission is poor. Its teachers are its bright former pupils. The manual method is used because of the subtle difficulties of the Annamese language. The school is for both sexes but they are educated separately.

Ed.

2301

Determination of Unilateral Deafness. F. H. QUIX, *Passows Beitr.*, Bd. 5, Heft 1, p. 7, 1911.

Thus far two methods have been employed for the diagnosis of bilateral deafness; that of Bezold and the "Laerm-apparat." Quix details experiments proving that neither method is reliable.

Ed.

2306

Deaf-mutism and its Treatment in America. J. SCHARA, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 1, p. 1 and Heft 2, p. 194, 1911.

During a year's sojourn in America the author studied the status of deaf-mutism in this country. He treats of the development of the deaf-mute-school in the United States and details the various method of teaching there in vogue. According to the author most of the schools have only a grade-school curriculum, though a few have kindergarten instruction and even high-school work. The course of study is long, lasting 10-14 years exclusive of the years of preparation. The internal mechanism of the different schools varies greatly due both to methods of instruction and to the individual freedom permitted to each teacher. Some provision has also been made by which teachers are given a one year's course. Schara regrets that the instruction is so largely in the hands of women.

Ed.

2311

Chronic Progressive Deafness. C. M. STEWART, *Can. Jour. of Med. and Surg.*, Feb., 1911.

The author classifies the various forms of deafness and presents in detail the chronic progressive or adhesive form. He believes that nasal obstruction is responsible for this form of deafness and outlines in detail the different clinical and pathological aspects of the different stages, from the ordinary "cold in the head" to the formation of the adhesive processes. He deals with the diagnosis and prognosis and gives an exhaustive account of the different methods of treatment, both preventative and curative, with the comparative benefits to be expected from each.

WISHART.

2318

Present Condition of the Instruction of the Deaf in France. B. THOLLON, *Eos*, July, 1911.

By the census of 1901 there were 19,514 deaf-mutes in France, or 51 to every 100,000 inhabitants. Reference to former censuses shows that deafness in France is decreasing.

In the mountainous regions of Savoy there were 195 per 100,000 of inhabitants. In the plains of Gironde only 19 per 100,000 inhabitants. France has three national schools for the deaf, several departmental schools and more than fifty private schools, many of which receive some financial aid from the State. Fourteen institutions have secular teachers; nine teachers formerly clerical, but now secularized; and thirty-seven are taught by clerics and religious sisters. All the schools are residential.

Conclusions: The education of the deaf in France still leaves much to be desired. A certain number of the deaf are as yet unprovided for in schools and remain doomed to ignorance. The whole group of schools makes the impression of scattered members which are separated from a well-trained, intelligent head. Re-organization is necessary. Splendid results are obtained at the Paris Institution.

WRIGHT.

2319

Wassermann Reaction in the Blind, Deaf-mutes and Epileptics of Denmark's Asylums. O. THOMSEN and W. LESCHLY, *Hospitalstidende*, March 29, 1911.

This is a continuation of a previous report. According to the present investigation, the reaction was negative in all (146) of the blind inmates; in 341 of 344 deaf mutes and in one of 259 epileptics. In two cases in which the reaction was positive, there were neither signs nor history of syphilis; in the other two there was a history of keratitis. Ed.

2322

Anomalies of Refraction in Deaf-mutes. VAN LINT, *La Policlin.*, Jan. 15-Feb. 1, 1911.

Sixty-five deaf-mutes were examined. Among these Van Lint found forty emmetropes, twenty-four hypermetropes, and one case of simple astigmatism, but no cases of simple myopia. With the ophthalmometer, fifty-two had equal astigmatism in both eyes, with axes vertical, except one.

Ed.

2326

The Deaf; Their Education, Improvement of Conditions, etc. J. D. WRIGHT.

Special editorial department, *THE LARYNGOSCOPE*, p. 178, March, 1911, and p. 741, June 1911.

2333

Traumatic Lesions of the Ear. GORHAM BACON, *Med. Rec.*, Nov. 25, 1911.

Numerous instances of trauma are cited. In rupture of the ear-drum due to sudden condensation or rarefaction of the air the symptoms are

not so severe as those due to direct trauma. The impairment of the hearing is also less marked. When the membrane is ruptured the force of the blow is felt on the membrane, the labyrinth generally escapes. When the internal ear is directly involved, the prognosis is unfavorable. The author warns the inexperienced not to remove foreign bodies from the ear. A number of interesting cases are detailed. One must not rely on the patient's statement that a foreign body is present; a thorough examination must always be made. Syringing the ear in traumatic cases is contra-indicated. The medico-legal question is important, for the difficulties are great in deciding as to whether an injury is due to traumatism unless the case is seen promptly after the supposed injury.

LEDERMANN.

2335

Clinical Study of Central Neuro-fibromatosis. G. BONDY, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 522, 1911.

Bondy reports a case of central neuro-fibromatosis which he has observed very carefully clinically, in which fibromatous complications of the skin and tonsils developed. He discusses also nineteen cases hitherto reported, in which bilateral acoustic tumors were found. In the presence of multiple neuro-fibromatosis one can make an almost positive diagnosis of bilateral acoustic tumor if symptoms of tumor of pons be present.

Ed.

2341

Pathology of the Ear. G. BRUEHL.

Original contribution to THE LARYNGOSCOPE, p. 971, Oct., 1911.

2343

Unusual Case of Otitic Pyemia Due to the Tetragonic Micrococcus. C. CALDERA and G. PINAROLI, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 34, Jan., 1911.

Abstracted in THE LARYNGOSCOPE, p. 964, Sept., 1911.

2344

Diseases and Accidents of Telephone Operators. CAPART, *Arch. internat. de Laryngol., d'Otol. et de Rhinol.*, p. 748, May, 1911, and *Presse Oto-Laryngol. Belge*, p. 209, May, 1911.

Capart quotes eminent otologists as to the effect of the telephone upon the ear. All agree that the danger is gradually diminishing with the perfection of the instrument. However there are some accidents which are unavoidable even under normal conditions, such as magnetic currents, when the contact is produced, which pass into the receiver and produce a very loud metallic sound. If the line asked for be busy, an acute sharp sound comes to the ear of the operator. Nervous troubles often, too, are noticed. Two cases of perforation of the tympanic membrane have been reported, as well as sudden deafness, loss of consciousness due to electric shock, etc.

Ed.

2345

Malformations of the Ear. A. CASTEX and G. BERRUYER, *Bull. d'Oto-Rhino-Laryngol.*, Jan., 1911.

The three divisions of the ear are considered from the point of view of possible deformities. Osseous obliteration of the auditory canal is almost always accompanied by decided malformation in the tympanic cavity. Nevertheless, under such conditions, there could still be some hearing-power, if the labyrinth be intact. Alterations in the latter are associated with anomalies of the facial and acoustic nerve.

The authors discuss the operative procedures. In osseous atresia of the auditory canal, the authors hold, with Toynbee, that operation is not accompanied with satisfactory results.

Ed.

2347

Retro-auricular Abscess Following Furuncle of Canal in a Patient Previously Operated for Mastoiditis. CHAVANNE, *Arch. internat. de Laryngol. d'Otol. et de Laryngol.*, p. 181, July, 1911.

Boy, aged 7 years. One year ago radical operation because of an acute mastoiditis. Infection from the auditory furuncle traveled an unusual course—through the tympanic membrane into the tympanum, resulting in a recurrent attack of purulent otitis media. The mastoid cavity, previously operated, became re-infected and from there the pus travelled through the still open wound in the bony wall to the outer skin. Wide incision of the abscess; recovery.

Ed.

2354

Cases of Aural Suppuration Presenting Irregular Symptoms. E. B. DENCH, *Ann. of Otol., Rhinol. and Laryngol.*, p. 129, March, 1911.

Case 1. Boy, 12 years of age. Radical operation for chronic suppurative otitis media, with primary graft applied. Four days after operation, slight rise of temperature, with nystagmus toward the healthy side. The graft was removed and the wound packed. Slight infection of superficial wound. Temperature normal in the morning, 102° to 103° in the afternoon, gradually rising towards evening. Rotation showed that the labyrinth of the affected side was dead. Blood culture was negative. Original infection was streptococcic. Lateral sinus thrombosis was suspected, and the internal jugular was removed. No clot found, but the symptoms disappeared. Blood culture after removal of vein was positive, but before the second operation, no streptococcemia was found.

Case 2. Differential diagnosis between typhoid fever and lateral sinus involvement following an acute suppurative otitis. Widal reaction was indefinite and at the end of forty-eight hours the mastoid was opened and the internal jugular was resected, though no thrombosis was seen. Recovery resulted, though blood culture was negative.

Case 3. Acute otitis following a submucous septum operation, with septic symptoms resembling malaria. No plasmodia found. Ear symptoms progressed favorably, but temperature remained. Typhoid fever suspected, but tests were negative. Recovery resulted without further surgical treatment.

LEDERMAN.

2357

- Auditory Scotoma in Its Relation to Vowels and Consonants.** E. ESCAT,
Bull. d'Oto-Rhinol-Laryngol., p. 1, Jan., 1911.
 Published in the *Presse Oto-Laryngol. Belge*, Oct., 1910.

2358

- Tobacco and the Hearing.** FERRAN, *Jour. des Docteur prat. de Lyon*,
 Sept. 30, 1911.

Ferran feels that it is wrong to permit the use of tobacco in families where deafness is hereditary or in sclerotic patients, both because of its effect on the nerves as well as on a catarrhal condition. In normal individuals a moderate use of tobacco is harmless. Ed.

2365

- Aural Diseases in Purpura, Rheumatica and Morbus Maculosus Werlhofii.** A. GUETTICH, *Passows Beitr.*, Bd. 5, Heft 4, p. 288, 1911.

Patient, woman, aged 24 years. Four years ago chills, fever and pains in the joints suddenly developed. Simultaneously there appeared on her breast and extremities red spots which, after a few days, changed to a black color. Tinnitus first in one, then in other ear; vertigo, uncontrollable vomiting, unconsciousness. On the fifth day, when the patient again became conscious, she was quite deaf. The vertigo lasted for fourteen days. Diagnosis: Bilateral hemato-tympanum.

Present examination revealed a normal tympanic membrane, total deafness, unresponsiveness of the semi-circular canals either to the turning or caloric tests. (Ruttin apparatus used.) The symptoms pointed to the fact that the hemorrhages had caused an extensive alteration in both labyrinths, and loss of function in the cochlea and vestibule. Ed.

2370

- Bacteriology of the Ear.** J. B. HUDSON, *Jour. A. M. A.*, p. 1363, Oct. 21, 1911.

Hudson's conclusions are drawn from pus examined in twenty-one cases of aural disease. He found that bacteria are normally present in the mastoid antrum; mastoiditis is caused by staphylococcus, streptococcus, micrococcus catarrhalis, diphtheria bacillus, bacillus coli communis, pneumo-bacillus, bacillus aerogenes capsulatus, micrococcus tetragenus, sarcina and bacillus subtilis; in three cases gram-negative streptococci were found. The few patients treated with vaccines after operation were remarkably benefited. Ed.

2374

- Hearing in Infants and Nurslings.** KUTVIRT, *Passows Beitr.*, Bd. 4, Heft 3, and Bd. 5, Heft 4, 1911.

Of the 192 children examined, 101 were 10 minutes to 24 hours old. The Bezold-Edelmann fork was used. Sharp tones were got by striking a non-weighted fork (e¹, e², e³) with a wooden handle or with the metallic portion of a hammer. The conclusions reached are: Three-fourths of the new-born are sensitive to sound; the acuity of hearing depends on the length and difficulty of the parturition; premature birth and prenatal influences also effect the hearing. Ed.

2376

Clinical Roentgen Findings in Ear Diseases. R. LEIDLER, *Arch. of Otol.*, Feb. 20, 1911.

In four complicated ear conditions the author found the Roentgen plates to be of marked diagnostic value. In two cases which proved to be malignant growths of the temporal bone, the symptoms were vague, and the X-ray plates showed well the topography of the tumor. The two other cases were congenital atresia of the external auditory canal; the plates showed the mandibular joint in contact with the interior wall of the mastoid process, with absence of the ostympanicum. YANKAUER.

2377

Paralysis of the Abducent Nerve of Otitic Origin. L. LETO, *Boll. delle Mal. dell'Orecchio della Gola e del Naso*, p. 75, April, 1911.

After describing Gradenigo's syndrome (acute purulent otitis media, pain in the temporo-parietal region, abducent paralysis on the affected side), Leto discussing the several theories as to the pathology and reports the case of a man of 42 years suffering from an acute otitis media in whom an abducens paralysis developed in twenty days. It was finally checked after two paracenteses. Ed.

2378

Bone-regeneration in the Ear; Experimental Study. O. LEVY, *Arch. f. Entwicklungsmech. d. Org.*, Bd. 30, Heft 1, 1911.

Levy experimented on the guinea pig in order to ascertain the bone regeneration after injury of the middle ear and labyrinth. After the trauma, the middle ear mucous membrane stimulated active hyperplasia of the stratum proprium; osseous trabeculae formed in the connective tissue which developed and formed a compact structure. The bony and cutaneous portions of the semi-circular canals showed no formative reaction after the trauma. The characteristic labyrinthine bone did not show the slightest predisposition to unite with the newly formed middle-ear bone. The two tissues remained permanently distinct. Ed.

2386

Examination of the Ears and Upper Respiratory Tract of Air Pilots. S. NIEDDU, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 11, Jan., 1911.

The special disturbances to which the aeronaut may be liable are sensations of sea-sickness, due to the unusual height, the influence of rapid motion, the differences of the air currents and the vapor through which he passes, change in air-pressure, fatigue and variation in the altitude.

The author states that those who are engaged in air navigation should have their labyrinths thoroughly tested, special emphasis being placed on the equilibrium and static function, perfect sense of direction, and acuity of hearing. The upper air passages should be in good condition.

LASAGNA.

2388

Reflex Disturbances Referable to the Ear. J. R. PAGE, *Boston Med. and Surg. Jour.*, Feb. 2, 1911.

Irritation of the acoustic nerve by a loud or unexpected sound produces contraction of the muscles of the body and the extent of the contraction may be controlled by the intensity of the sound. Musical tones or certain sound may produce dizziness, spasm of the respiratory muscles and changes in the heart's action, especially in neurasthenics. Intractable coughs and stubborn neuralgias could at times be relieved by removing cerumen from the ear. Middle-ear disturbances could result in suicidal mania, profound melancholia, headache, intense facial neuralgias, causing temporary facial paralysis. By irritating a normal labyrinth all symptoms of sea-sickness may be produced. Ed.

2391

Significance of Otologic Findings in Reference to Trauma of the Head. RHESE, *Med. Klinik.*, Feb. 12, 1911.

Rhese numerates the various aural sequelae of head injury. Even a long time after the trauma, extravasations of blood, cicatrices and vessel changes may be observed in the drum membrane. In the tympanum, hemorrhage, membranous distortions and tearing, loosening of joints, dislocation of the ossicles with displacement of the tympanic membrane results. The author discusses in detail the effect of trauma on the vestibular nerve apparatus, which can be tested only by Barany's method. A specific symptom of head injury is the shortening of bone conduction for normal sounds. Ed.

2392

Relationship Between Diseases of the Ear and Those of the Eye. D. ROY, *Jour. A. M. A.*, p. 1095, Sept. 30, 1911.

According to Roy, every ophthalmologist must have considerable knowledge of ear, nose and throat diseases, though the oto-laryngologist may work almost independent of the ophthalmologist. The only instance which he has seen personally where the latter was not true was a case of tinnitus aurium relieved by the correction of a refraction error. Frequently, however, eye diseases arise from ear infection; ocular paralysis may be due to direct transmission of the aural infection. Roy also discusses the association of color and hearing anomalies. Ed.

2394

Aural Lesions Due to Lightning. L. RUGANI, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 353, Sept., 1911.

Lesions of the tympanic membrane caused by thunder and lightning are: Rupture of membrane followed by otorrhea or hemorrhage; disarticulation of ossicles; labyrinthine disturbances with complete deafness; vertigo; and subjective noises. LASAGNA.

2396

Papillitis With Otogenous Complications. E. R. RUTIN.

Original contribution to THE LARYNGOSCOPE, p. 1051, Nov., 1911.

2397

Anatomic Findings in Human Ear After Fracture of Base of Skull. K.

SAKAI, *Arch. f. Ohrenh.*, p. 188, Bd. 85, Heft 3, 1911.

Examination of five cases of bilateral fracture of the petrous portion of the temporal bone led the author to the following conclusions: 1. The osseous labyrinthine capsule is never affected by the fracture. 2. In eight instances there was an extravasation of blood to the surface of the round window, in seven to the annular ligament of the oval window. 3. Only once was there a perforation in the annular ligament. 4. The acoustic nerve and its branches, in all the cases, was the seat of a profuse hemorrhage; there was a perforation at the surface of the cochlear nerve in eight instances and in the vestibular nerve in four. 5. In five cases there was a hemorrhage in the soft portion of the vestibular apparatus, sacculus, utriculus and semi-circular canals. Once there was hemorrhage in the facial nerve, four times in the Fallopiian canal, twice in the spiral ligament and twice in the spiral ganglion. Ed.

2404

Blood-cultures in Otology. F. E. SONDERN, *Ann. of Otol. Rhinol. and Laryngol.*, p. 621, Sept., 1911.

Sondern points out the diagnostic value of a positive or negative blood culture in certain ear conditions. He discusses its indication and details of the technic. Ed.

2406

Sea-sickness. R. SPIRA, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 1, p. 35, 1911.

Spira is of the opinion that sea sickness is due to being unaccustomed to certain movements and can be cured by getting oneself used to these particular motions. During a fifteen months' trip on the ocean he experimented upon himself. A few weeks prior to his trip, he regularly practiced certain gymnastic and mechanical exercises and found this method to be an effective preventative. The exercises to be performed are numerous movements in every direction. Ed.

2407

Pendular Stimulation of Tuning-forks Mounted on a Sounding Box. A.

STEFFANINI, *Arch. ital. di Otol. Rinol. de Laringol.*, p. 270, No. 4, 1911.

To test the hearing more accurately by means of the tuning-fork, the author uses the following method: He mounts a tuning-fork on a sounding box, suspends a definitely determined weight by four threads at an equal distance from the tuning-fork and permits same to strike the fork from a constant point. He changes the weight for each tuning-fork and establishes the relation between the weight (in grams) and the duration of the sound (in seconds). LASAGNA.

2409

Removal of Scissor-blade From Ear Three Years and Three Months After Its Introduction. O. J. STEIN.

Original contribution to *THE LARYNGOSCOPE*, p. 690, June, 1911.

2412

Examination of 200 Persons Over 50 Years of Age in Reference to Their Hearing Power. U. L. TORRINI, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 2 u. 3, 1911.

Torrini concludes from these careful observations that there is a distinct decrease both in sound conduction, as well as in sound perception, especially for upper tones in people over 50 years of age. There was an especial depreciation for the whispered voice. In cases where there was a history of past inflammatory ear trouble, the depreciation in the hearing was more marked. Ed.

2415

Significance of Blood-test in Otology. E. URBANTSCHITSCH, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Bd. 45, Heft 6, p. 81, 1911.

Urbantschitsch reports the results of seventy-five ear-patients in whom hematologic examination was made. The author observes the variable character in inflammatory conditions of similar kind and hence the difficulty of drawing definite conclusions for diagnosis from the blood examination alone. The relative count of the neutrophilic to the eosinophilic leucocytes is of great importance in establishing the diagnosis and prognosis; the absolute count of the leucocytes is of secondary value and is only a factor to be considered in conjunction with other symptoms.

In acute or chronic uncomplicated suppurative otitis media the leucocyte proportion does not materially vary nor the percentage of the several forms of leucocytes, and leucocytosis when present is usually of mild degree. When abscess of the soft parts complicates such middle-ear suppurative processes, the hematologic findings may closely resemble those observed in intra-cranial complications. The blood examination is of great diagnostic importance in middle-ear inflammation without otorrhea especially when a pus focus in the mastoid area is in question. Here especially in mastoiditis narcosis there is a relative increase of the polynuclear cells, a diminution of the eosinophilic leucocytes and a usual amount of leucocytosis. Such evidences point to the possibility of external bone suppuration and indicate operation even if the clinical symptoms are obscure.

In insidious advanced labyrinthine disease there appear to be no characteristic blood changes; in acute suppurative labyrinthitis, however, or in acute suppurative inflammation of the labyrinthine capsule the hematologic findings may resemble those of intra-cranial complications. In this case a more moderate leucocytosis was marked and increase of the neutrophilic and an unusual decrease in the eosinophilic leucocytes. These relations are of a most definite form in suppurative meningitis; for that an absolute leucocytes count of 20,000-40,000 may be present together with an almost complete absence of eosinophilic leucocytes. A diagnosis of sinus thrombosis, peri-sinual abscess, and sepsis cannot be made from hematologic examination alone, but only intra-cranial complications may be definitely indicated thereby. Brain abscess according to the hematologic picture, may be placed as an intermediate position

between sinus thrombosis and suppurative meningitis. In ten fatal cases there existed simultaneously a marked increase of neutrophilic and a high leucocytosis together with absence of eosinophilic leucocytes. In such a condition the prognosis must be guardedly made.

The author concludes that blood examination plays an important role in otology with the provision that the hematologic findings be always considered in their relations to clinical data in each case. GOLDSTEIN.

2430

Determination of Upper Tone Limit of Hearing in Air and Bone Conduction by Means of Monochord of Struycken. F. CHAVANNE, *Ann. des Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 870, No. 9, 1911.

The author describes the new monochord and illustrates his article with tables to show its practical value in examination. Ed.

2432

Technic of Aural Examination in Infancy and Early Childhood. P. M. CONSTANTIN, *Rev. hebdomadaire de Laringol., d'Otol. et de Rhinol.*, p. 737, Dec. 23, 1911.

Constantin tests the hearing in very young children by means of the voice, tuning-forks and the Galton whistle. While making the test the child is given a small mirror with which to play, the examiner standing behind the child. When the fork is placed before the ear, the child turns to that side. Sometimes two tuning-forks are used, one placed on each mastoid; but only one is set in vibration; if the child hears it it will turn to that side. The facial expression of the child, too, must be carefully watched. Ed.

2435

Treatment of Acute Purulent Otitis Media. L. EMERSON, *Jour. of Med. Soc. of N. J.*, 1911.

The importance of prophylactic and efficient active treatment is urged.

1. Rest in bed, a saline cathartic, external dry heat and a few drops of 1-8000 adrenalin in the nose every hour.
2. If indicated, or when in doubt, paracentesis under local or general anesthesia (nitrous oxide).
3. Daily dry mopping of meatus, insertion of gauze wick, suction with the Siegel otoscope and light insufflation of powder. EDGAR (GOLDSTEIN).

2439

New Method of Determining Bone-conduction. H. FREY, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 531, 1911.

Frey instituted experiments to determine the difference in bone and difference in the rate of air conduction in normal people and the rate air conduction, in normal individuals, the difference in the length of time in air conduction in normal cases and in his patients, and the of bone conduction in the patients examined. Ed.

2442

Treatment of External Otitis by Means of Active Hyperemia. S. GAT-SCHER, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 556, 1911.

For all forms of external otitis irrigation of the external auditory canal with warm water is recommended. These washings should be repeated two, three, or even four times daily. The tympanic cavity is protected by means of a cotton tamponade; after the irrigation and drying, gauze is introduced and over it a dry or alcohol-saturated dressing. The author points out the quick relief from pain afforded in sixty patients, and the healing by resorption, without surgical procedure, in cases of furunculosis, and the prevention of contact-furuncle formation. Diffuse external otitis cleared in ten to twelve days; abscesses and furuncles spread over a longer period.

Ed.

2444

Resume of the Modern Operative Procedures in Ear Affections. H. B. GRAHAM.

Original contribution to *THE LARYNGOSCOPE*, p. 948, Sept., 1911.

2445

The Yankauer Operation in the Treatment of Chronic Middle-ear Sup-puration. H. HAYS.

Original contribution to *THE LARYNGOSCOPE*, p. 653, May, 1911.

2461

Value of Lumbar Puncture in the Treatment of Aural Vertigo. J. J. PUTNAM.

Original contribution to *THE LARYNGOSCOPE*, p. 940, Sept., 1911.

2463

Methodical Exercises for Improving the Hearing. M. RAUCH, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, Heft 5, p. 583, 1911.

The purpose of this paper is to emphasize the importance of the system of acoustic gymnastics as originally suggested by V. Urbantschitsch some twenty years ago. The author discusses the selection of the proper kind of cases for this training and describes many of the practical details of this system.

GOLDSTEIN.

2467

Wider Range for Use of Struycken's Monochord. K. L. SCHAEFER, *Pas-sows Beitr.*, Bd. 4, Heft 5, p. 376, 1911.

The Struycker monochord is also of use in testing bone conduction for the higher tones. There is a gap in testing tones from a^2 to the tones of the monochord. This gap can be filled by using not only the longitudinal tones, but also the transversal ones. This puts at our disposal means of testing the hearing, for bone and air conduction from the low octave continuously to the upper hearing range.

Ed.

2469

Bacterial Vaccines in Middle-ear Infections in Infants and Young Children. E. M. SILL, *N. Y. State Jour. of Med.*, April, 1911.

Sill treated in all 124 cases; 70 were cured, 22 improved; of 24 he lost track; 5 were unaffected; 3 required mastoid operation. The ages of the children ranged from a few months to 10 years; in some cases the ears had been discharging for several years; in some from birth; in several instances the discharge was the result of previous infectious disease. Cultures from the ears showed staphylococcus albus, 39 times; staphylococcus citreus, 12 times; staphylococcus aureus, 19 times; streptococcus, 26 times; staphylococcus aureus albus citreus and streptococcus, 12 times; diphtheria bacillus, 14 times; diplococcus or pneumococcus, 4 times. In some cases one injection sufficed, while others needed several and nine injections were required by one case. Length of treatment varied from one day to six months. The vaccines were usually injected into the buttocks of the child. During the first day there was frequently a slight rise in temperature and in pulse rate. Improvement was noted on the third day.

Ed.

2471

Analysis of the Weber Test in 100 Cases. R. SONNENSCHNIG, *THE LARYNGOSCOPE*, p. 660, May, 1911, and *Ill. Med. Jour.*, June, 1911.

Original contribution to *THE LARYNGOSCOPE*, p. 660, May, 1911.

2473

Operative Treatment of Suppurative Labyrinthine Meningitis. L. STACKE, *Deut. med. Wchnschr.*, June 29, 1911.

The prognosis in operative treatment of otitic meningitis is good, for these cases can usually be diagnosed in their incipient stages, and the diagnosis verified by lumbar puncture. If a deep cerebellar abscess form, the incision will have to be carried back into the cerebellum. Three such cases have been reported, and Stacke describes another, in a woman, 34 years old. In the latter case chronic aural trouble was cured at the same time. Stacke points out the value of lumbar puncture in ear disease; the composition and pressure of the fluid throw light on intra-cranial complications. He states that he has not had harmful effects in any case even from repeated punctures.

Ed.

2474

Simple Method of Using the Monochord. A. STEFFANINI, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 414, Sept., 1911.

The monochord is used with Koenig's steel cylinder and with a V tuning-fork, the monochord being put in contact with them. Its length is to be varied till the vibrations succeed in making the tuning-fork and the cylinder vibrate.

A chord 64 cm. long is used.

LASAGNA.

2475**Effect of Bier's Hyperemia in Non-suppurative Disease of the Ear. C.**

STEIN, *Arch. f. Ohrenh.*, Bd. 86, Heft 1-2, p. 93, 1911.

An entirely successful result in the use of Bier's hyperemia for non-suppurative affections of the middle ear was obtained in only a limited number of cases. The author feels that, though it alone is of little value, it should be used in combination with other therapeutic measures, whose effect it seems to intensify. Stein states that the genesis of subjective tinnitus may be distinguished by the effect of this hyperemia treatment. If the tinnitus be due to diminution or increase in the blood pressure Bier's hyperemia treatment will produce marked improvement. However, when the vascular tinnitus originates in the ear itself (aural inflammation, otosclerosis), this therapy often even increases the trouble.

Ed.

2477

On the Use of the Wire Saw in the Radical Operation on the Middle-ear. V. S. STEIN, *Jour. of Laryngol. Rhinol. and Otol.*, p. 123, March, 1911.

Published in the *Dansk. Klin.*, p. 950, 1910, and in the *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, Dec. 3, 1910.

Ed.

2478

Use of Cylindrical Gauze and Cotton Drains in Discharging Ears. M. D.

STEVENSON, *Jour. A. M. A.*, p. 262, Jan. 28, 1911.

Gauze drainage in the ear after mastoid operations or in acute or chronic otorrhea is of advantage, but inconvenient in that the gauze must be inserted either by the physician or nurse. To overcome this disadvantage, the author has devised a drain which can be easily introduced or removed by means of simple forceps. This drain consists of a narrow strip of gauze rolled, doubled on itself, on the end of a sterile toothpick, in the form of a cigarette. The toothpick is withdrawn after the drain has been partially introduced, and its opposite dull end used to push the gauze into the meatus. The outer end is then packed with gauze to hold the drain in place and absorb the excess of discharge. Stevenson thinks these drains are especially indicated in acute cases and in profusely discharging chronic cases. Patients handle these drains well, and no untoward results have been observed. They are manufactured and supplied sterile, ten in an envelope, each six inches long.

Ed.

2480

Practical Method of Using Tuning-forks and Determining Hearing Power.

I. TOMMASI, *Arch. ital. di Otol., Rinol. e Laringol.*, p. 47, Jan., 1911.

The author explains but briefly with illustrated tables the known methods of acoumetry according to Gradenigo and Stefanini.

LASAGNA.

2485

Treatment of Suppurative Otitis Media (Scarlatinal) by Bacterial Vaccines (Bacterins). P. G. WESTON and J. A. KOLMER, *Jour. A. M. A.*, p. 1088, April 15, 1911.

The authors draw their conclusions from a study of 100 cases. The best results are obtained if the cases are reported on the third day of the discharge. Then the patient can be watched for a day, a culture taken, and the organism isolated and the vaccine prepared during the following five or six days. If the patient's general condition is good at the end of that time, the vaccine is given. If no effect is apparent at the end of ten days, a fresh vaccine should be prepared. The bacillus pyocyaneus was the only bacillus found in long-standing cases. The following conclusions are drawn: "(1) The best time, all things considered, for commencing vaccine treatment in cases of otitis media is from the eighth to the sixteenth day of the discharge. (2) Continued high fever, nephritis, toxemia and various intercurrent affections are contraindications to the administration of vaccines. (3) Under vaccine treatment three times as many patients are cured within thirty days and permitted to go home as under the usual treatment. This means that the average residence of a patient in the hospital has been considerably decreased. (4) In general, cases of otitis media offer a fruitful and encouraging field for the employment of vaccine therapy." Ed.

2488

Fibrolysin in Otology. M. YEARSLEY, *Jour. of Laryngol., Rhinol. and Otol.*, p. 225, May, 1911.

Yearsley gives a resume of the results of fibrolysin in otology, gathered from the experience of several aurists. The consensus of opinion is contradictory both as to its toxic character and as to its effectiveness. Under certain conditions its combination with mechanic treatment seems advisable. The author, himself, is unable to report satisfactory results. In only three of the twenty cases thus treated was there any improvement, and even in these cases it is uncertain whether the effect was due to the use of fibrolysin. Ed.

2490

Symptom of Mastoid Disease. H. A. ALDERTON.

Original contribution to *THE LARYNGOSCOPE*, p. 1176, Dec., 1911.

2491

Transillumination of the Mastoid Process as an Aid to Diagnosis. EMIL AMBERG, *Jour. A. M. A.*, June 3, 1911.

Amberg reports a case of mastoiditis in a man 21 years of age. Transillumination of the mastoid by Dintenfass' method, a distinct increase of the shadow on the affected side being shown, was an important aid to diagnosis in a case otherwise doubtful. He compares Urbantschitsch's with Dintenfass' method. Urbantschitsch places the light over the mastoid and examines the drum membrane through the speculum, while Dintenfass introduces a lamp of equal power into each

of the two external auditory canals and compares the two mastoids, assuming them to be normally alike. Dintenfass claims that a pneumatic bone allows much light to pass, a sclerosed one much less, while a mastoid containing fluid (pus), granulations or cholesteatoma, allows no light to pass through. Dintenfass claims that his method is of value only as an aid to diagnosis; it itself is of little value, but it gives interesting disclosures about the mastoid. HALSTED.

2492

Primary Infantile Mastoiditis. M. ARTELLI, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 138, March, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 46, Jan., 1912.

2497

Thirteen Cases of Bezold's Mastoiditis. BOTELLA, *Arch. internat. de Laryngol., d'Otol. et de Rhinol.*, p. 26, Jan.-Feb., 1911.

Among thirteen cases of mastoiditis associated with cervical abscess Botella met twice with facial palsy. Both these cases were of exceptional severity; there were very deep bone lesions and large abscesses. One of them ended fatally. The perforation of the mastoid process which led to the cervical abscess was found thrice in the internal table near the sulcus digastricus, five times at the tip of the process; in five other cases the whole process was involved. Bulging of the sterno-mastoid region does not mean a Bezold in every case of mastoiditis; the author has seen two cases of that kind without caries of the mastoid, the tumor in the cervical being due only to infiltration of the tissues. In six out of the thirteen cases, it was possible to make the pus flow out of the external ear in exerting pressure on the cervical abscess. This sign cannot therefore be considered as pathognomonical of Bezold's mastoiditis. Curious enough it was missing in three cases where the perforation of the process had taken place on the typical point. On the other hand Botella relates a case where this sign was obtained although there was positively no perforation of the mastoid process, the pus being intra-muscular. MUNCH.

2501

Unusual Form of Mastoiditis in Chronic Infantile Otorrhea—Black Mastoiditis. BRINDEL, *Rev. hebdomadaire de Laryngol., d'Otol. et de Rhinol.*, p. 401, Sept. 30, 1911.

"Mastoiditis nigra" is a term used by Brindel to designate a peculiar form of inflammation found only in sixteen of 12,000 operated cases. It occurs almost entirely in children in the course of a chronic, usually fetid otitis media and is characterized by a diffuse mastoid infection which bleeds but little when opened, and by the black color of the cell-walls and of their contents. In cases of long-standing otorrhea, changes are apparent—fungoid growths, cholesteatomata, labyrinthitis, involvement of the tabula interna, etc. The mastoid cells must be thoroughly cleaned out; recovery is usually uneventful. In two instances a vesicle filled with a black fluid was found in the depths of the operated cavity, six years after the intervention. The pathogenesis of this form of mastoiditis is still obscure. ED.

2505

Parotid Fistulae After Mastoid Operations. V. COMBIER, *Ann. des Mal. de l'Oreille, du Larynx, du Nez et du Pharynx*, p. 14, Jan., 1911.

Three cases of parotid fistulae after usual antrotomy. Two such cases were previously reported by Kretschmann. Parotic tissue has a tendency to heal quickly so that operative lesion cicatrize rapidly. Infectious processes are also excluded in this case and a mechanical explanation sought. Combiér thinks that after a slight operative lesion which cicatrized rapidly, induration set in. Saliva collected at this point, and a sac formed, and perforated. In the above-mentioned case a rapid cure was effected by injection of tincture of iodid.

Ed.

2507

Atypical Mastoiditis. E. A. CROCKETT.

Original contribution to *THE LARYNGOSCOPE*, p. 763, July, 1911.

2509

Atypical Mastoiditis. E. B. DENCH, *Interstate Med. Jour.*, p. 1102, Nov., 1911.

Dench designates the appearance of the fundus of the canal as the most characteristic sign in atypical cases. There is usually present a pronounced sinking of the upper and posterior wall of the external auditory canal or at times an elevation of its floor. If disturbance in the hearing prevails for two months or more after an acute otitis, mastoid trouble should be suspected, as also in cases of profuse otorrhea which are not relieved by irrigation or incision. In three cases Dench found a spontaneous perforation on the posterior wall of the external auditory canal, which simulated a furunculosis. With the development of Roentgen-ray technic much more definite diagnoses will be made.

Ed.

2512

Case of Bezold's Mastoiditis with Infra-occipital Involvement. R. FERNANDES, *Presse Oto-Laryngol. Belge*, p. 64, Feb., 1911.

Man aged 59 years suffered since three months from acute otitis on right side. Abundant pus; swelling of mastoid region extending from the base of the sterno-cleido-mastoid muscle to the posterior occipital region. The tumor was pyriform, the size of a bottle gourd. Mastoid carious; upon pressure on the sternum the pus spread to the mastoid tip. Pus on side of pharyngeal wall, and around atlas and splenius and complexus muscles. On the third day the splenius and small complexus were incised. Recovery.

Ed.

2513

Indications for the Mastoid Operation.

F. E. FRANCHERE, *Jour. of Ophth. and Oto-Laryngol.*, Dec., 1911.

A consideration is given to the various signs and symptoms as well as aids to diagnosis, and a plea entered for early operation.

STEIN.

2514

Fetid Necrosis Following Simple Mastoid Operation. H. FRIEDENWALD.

Original contribution to *THE LARYNGOSCOPE*, p. 697, June, 1911.

2515

Five Cases of Facial Paralysis Following Surgical Intervention. J. GALDIZ, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 103, Jan., 1911.

In five cases of otitis media, facial palsy occurred. Of these, four recovered after mastoid operation. One patient where palsy of the velum was associated with left facial palsy, died in spite of operation. At autopsy, an extra-dural abscess, as large as a walnut, containing cheesy matter, was discovered, extending on the postero-superior aspect of the petrosal from the tip to the base of this bone. To the naked eye, no connection seemed to exist between this abscess and the mastoid cavity; and for this reason the abscess had escaped notice at both operations which had been performed.

MUNCH.

2516

Case of Spindle-celled Sarcoma of Mastoid. O. GLOGAU, *Ann. of Otol., Rhinol. and Laryngol.*, p. 428, June, 1911.

No similar case was found by the author in the literature. A man, aged 45, was brought half fainting into the office. On account of pain in the left ear "his drum had been opened" three months previously. Two weeks later "the bone had been opened" and two months later the "bone had been cleaned out thoroughly." The patient had a large cauliflower mass extending upwards to the top of the auricle, downwards to the shoulder, forward to the middle line of the neck and backwards to the middle of the occiput. This mass was covered with a foul discharge. The external meatus was also filled. There was a pronounced rotatory nystagmus to the right and apparent deafness in the left ear. Microscopic examination showed the growth to be a spindle-celled sarcoma. The patient died in a few days. No post-mortem.

EDGAR (GOLDSTEIN.)

2519

Atypical Mastoiditis—Its Cause, Pathology, Symptomatology and Diagnosis. T. J. HARRIS.

Original contribution to THE LARYNGOSCOPE, p. 769, July, 1911.

2521

Some Anomalies of the Mastoid from a Surgical Aspect. H. B. HITZ.

Original contribution to THE LARYNGOSCOPE, p. 1164, Dec., 1911.

2523

Recurring Mastoiditis. S. V. W. JANTZEN, *Ugeskr. f. Leger*, Jan. 26, 1911, and *Arch. f. Ohrenh.*, Bd. 86, Heft 3-4, p. 175, 1911.

Abstracted in THE LARYNGOSCOPE, p. 740, June, 1911.

2527

Congested Mastoiditis. LUNGHINI, *Policlinico*, No. 2, 1911.

Lunghini feels that this condition is very rare. It is caused by a diploic mastoidal apophysis and a suppurative otitis media of relatively attenuated virulence.

Ed.

2528

Total Sequestration of Mastoid in a Diabetic; Partial Evisceration; Recovery. H. MASSIER. *Rev. hebdomadaire de Laryngologie, d'Otologie et de Rhinologie*, p. 745, Dec. 23, 1911.

Massier reports a severe case of diabetes upon which he successfully performed a mastoid operation. He concludes, therefore, that this disease is not a contra-indication for the mastoid operation. Ed.

2533

Cystic Mastoiditis. F. RUEDA, *Revista Española de Laringología*, May-June, 1911.

The patient had had an aural suppuration, which cleared up. Nevertheless, the pains persisted and a radical operation was necessitated. At the depth of 3 mm. a cyst was found containing a light, foul smelling pus. Ed.

2538

Mastoiditis Without Apparent Involvement of the Middle-ear. C. E. PERKINS.

American Medicine, May, 1911, and *Annals of Otology, Rhinology and Laryngology*, p. 423, June, 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 1088, Nov., 1911.

2540

Case of Rarefying Osteitis of the Mastoid Bone. C. W. RICHARDSON, *Annals of Otology, Rhinology and Laryngology*, p. 618, Sept., 1911.

Microscopic examination of the specimen revealed a red and much softened bone, some of the pieces were easily fractured by pressure of the fingers. After decalcification the specimen showed an increased production of connective tissue and round cell infiltration; character and morphology of cells excluded malignancy; areas in which bone is undergoing absorption and those in which there is a direct formation of new bone. Ed.

2543

Atypical Mastoiditis. J. A. STUCKY.

Original contribution to *THE LARYNGOSCOPE*, p. 769, July, 1911.

2544

Influence of the Radical Operation on Acuity of Hearing. C. A. TORRIGIANI, *Archivum Italianum di Otologia, Rhinologia et Laryngologia*, p. 303, July, 1911.

Torrighiani examined fifty-one patients upon whom a radical mastoid operation had been performed, and draws the following conclusions: (1) The more conservative the operation, the better the functional results; (2) If the labyrinth be injured, the auditory acuteness does not change; (3) diminution of tympanic perception points to an unfavorable prognosis. LASAGNA.

2545

Clinical and Bacteriological Study of Thirty-six Cases of Mastoid Suppuration Including Ten Cases of Intra-cranial Complications. A. L. TURNER and F. E. REYNOLDS, *Jour. of Laryngol. Rhinol. and Otol.*, p. 57, Feb., 1911.

The material for bacteriological examination was obtained at the time of mastoidectomy. (1) Cases of acute or recent middle ear suppuration with abscess in the mastoid cells, fifteen in number. The pneumatic type of mastoid was most favorable for abscess. To differentiate the type of cells, X-ray and percussion did not prove of great value. Streptococci infected cases were the most common and, in general, the severest. Staphylococci and others were also noted. (2) Cases of chronic suppuration (a) with mastoid symptoms, eleven cases. Microorganisms similar to those found in acute cases; (b) ten cases of intra-cranial inflammation. Five of these exhibited purulent meningitis and five of them sigmoid sinus suppuration, one of the latter along with cerebellar abscess. Cholesteatoma was found in twelve of the twenty-one chronic cases, and was associated with three proteus in nine. Six of the ten cases of intra-cranial complications were proved to involve the inner ear. An experience with collargol injected into spinal canal is cited.

EDGAR (GOLDSTEIN.)

2553

Thrombosis of the Internal Jugular Vein and Transverse Sinus After Angina and Abscess of Glands. P. BONNIES, *Passows Beitr.*, Bd. 4, Heft 1-3, 1911.

In this case the author found periphlebitis, phlebitis and infectious suppurative thrombosis of the jugular vein complicated with suppuration of a deep-seated cervical gland, following angina. The process extended downwards to the vena anonyma and upwards into the sigmoid sinus. The case terminated fatally due to the pyemia, in spite of operative interference. The middle ear and mastoid process were intact. Because of the pain and swelling the latter was regarded as the exit-point of the pyemia.

Ed.

2554

Sigmoid Sinus and Jugular Bulb of Infants. W. C. BRAISLIN.
Original contribution to THE LARYNGOSCOPE, p. 1178, Dec., 1911.

2555

Case of Bilateral Sinus Thrombosis Complicating Purulent Otitis Media. Recovery. DAUSOND, *Passows Beitr.*, Bd. 4, p. 395, 1911.

In a case of chronic suppurative otitis a sinus thrombosis developed on the right side. In spite of surgical intervention the other side also became affected. As soon as the symptoms developed on the left mastoid process, trepanation was performed and the transversus which was thrombosed, was exposed. Recovery.

Ed.

2557

Lateral Sinus Thrombosis Followed by Pyemia; Abscess in the Prostate; Operation; Recovery. J. G. FRENCH, *Jour. of Laryngol. Rhinol. and Otol.*, p. 520, Oct., 1911.

Patient, boy of 14 years. Consequent to an acute suppurative otitis media, following measles, a metastatic abscess in the prostate formed, even after the sinus had been evacuated and the thrombosed jugular vein sutured and resected. The abscess emptied into the rectum. Recovery. Ed.

2569

Severe Case of Septic Scarlet Fever Complicated with Sinus Thrombosis and Suppurative Meningitis. P. OHNACKER, *Ztschr. f. Ohrenh. u. f. Krankh. d. Luftw.*, Vol. 63, Heft 4, p. 333, 1911.

Patient, girl of 5 years. Severe septic scarlet fever; purulent otitis media first on right side, then on left; sinus thrombosis and extradural abscess of the right cranial fossa; suppurative meningitis. The only symptom pointing to sinus thrombosis was the persisting, high fever. Meningeal symptoms continued even after sinus operation, and two intra-lumbar injections, each of 20 ccm., of antistreptococcal serum, were made; rapid improvement. Four days after the second operation the lumbar puncture gave a clear fluid; eight days later all cerebral symptoms had cleared up. The operative cavity healed very slowly and sequestrae formed on both sides. Only after six months could the child be dismissed from the hospital. Ohnacker attributes the good results in this case to the serum-injections. Ed.

2572

Suppurative Sinus Thrombosis Drained Through the Jugular Vein. A. REJTO, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, p. 949, Heft 8, 1911.

In this case, reported by Rejto, a complete sinus operation could not be accomplished. Effective drainage was produced by ligating the jugular vein and sewing its upper end into the incision. Complete recovery resulted. Ed.

2574

Septic Thrombosis of the Sigmoid and Lateral Sinus Complicating Double Mastoiditis. F. C. TODD, *Jour. Minn. State Med. Assn. and N. W. Lancet*, March 1, 1911.

Case of bilateral acute suppurative otitis media in which a mastoid abscess developed on one side and a septic sinus thrombosis on the other. Bilateral mastoid operation; resection of internal jugular vein and opening of sinus. Recovery complete. Ed.

2575

Prognosis and Treatment of Otogenic Pyemia, Sinus Phlebitis, and Sinus Thrombosis. V. UCHERMANN, *Arch. of Otol.*, May 10, 1911.

From personal experience, the author has formulated the following rule as a prophylactic measure in the treatment of otogenic pyemia: When in an acute suppurated otitis media the temperature has not subsided

after the eighth day, in spite of large perforation of the drum, antrotomy is to be performed; this whether mastoid tenderness is or is not present. Otherwise there is danger of pyemia, especially in adults. YANKAUER.

2579

Report of a Case of Thrombosis of the Lateral Sinus Exhibiting Symptoms of Cerebellar Abscess. J. W. WOOD, *Jour. of Laryngol. Rhinol. and Otol.*, p. 253, May, 1911.

The case is noteworthy in that there were present many symptoms, in addition to those characteristic of sinus thrombosis, which pointed to cerebellar abscess, namely, basilar headache, nausea, vertigo, spontaneous nystagmus which was at first more pronounced when the eyes were directed to the healthy side, but was later reversed. When the head was tilted backwards lessened strength in the hand on the diseased side; ataxia when in a maintained voluntary position. Cerebellar puncture negative. Wood explains these symptoms as due to pressure of the increased cerebro-spinal fluid on the cerebellum; after opening the dura of the posterior and middle cranial fossa and making a lumbar puncture, the disorders disappeared. Sinus operation with ligature of jugular vein. Recovery. Ed.

2580

Symptomatology of Extra-dural Abscess. Extra-dural Abscess with Speech Disturbances. G. ALEXANDER, *Monatschr. f. Ohrenh. u. Laryngol-Rhinol.*, Bd. 45, Hefte 4-6, 1911.

The abscess was situated under a granulation mass 10 cm. long and 3 wide. It was large, containing about 100 ccm. of pus and pushed the dura about 3 cm. away from the cranial wall. Because of compression of the parietal and temporal lobes an amnesic aphasia resulted. The case was operated and all the symptoms thus relieved. Ed.

2587

Gradenigo's Syndrome at the Beginning of the Evolution of a Sarcoma at the Base of the Brain. G. COULET, *Rev. hebdom. de Laryngol. d'Otol. et de Rhinol.*, p. 435, April 22, 1911.

Abstracted in THE LARYNGOSCOPE, p. 768, July, 1911.

2591

Report of Two Cases of Cerebellar Abscess with Thrombosis of the Lateral Sinus; Operation; Recovery. D. S. DOUGHERTY, *Ann. of Otol. Rhinol. and Laryngol.*, p. 434, June, 1911.

Case 1.—Chronic suppurative otitis media, followed by peri-sinus abscess, gangrenous thrombus of lateral sinus, and cerebellar abscess. The patient exhibited among other symptoms vertigo, slight nystagmus, chills, mastoid tenderness, and a profuse foul-smelling aural discharge. Mastoid operation disclosed an almost total destruction of mastoid cells, and a dark slimy fluid coming from a perforation in the bony casement of the lateral sinus which was necrosed and gangrenous. A greenish clot was removed and the sinus curetted from torcula to bulb. Six days later the jugular was found diseased and was resected to the clavicle. Some

days later an abscess in the spheno-temporal lobe was opened through the tegmen tympani. Better drainage was secured a week later by a flap in the occipital bone. The development of a hernia necessitated plastic operations. Patient discharged in two months.

Case 2.—Chronic suppurative otitis media; thrombosis of lateral sinus; cerebellar abscess. Examination showed the external auditory meatus filled with polypi. Mastoid tenderness and slight facial paralysis were present. A radical mastoid was done revealing pus in mastoid cells and antrum and granulations and polypi in tympanum. The facial nerve and lateral sinus were exposed. The latter was laid bare, a clot removed, and curetted, free circulation being established. The patient's condition was good for three weeks but a chill and rise of temperature to 103.6° was the occasion for immediate operation. The spheno-temporal lobe was explored by way of an opening made in the tegmen, but with negative results. An abscess was found, however, under the knee of the sinus and drained. The temperature dropped and the patient had an uneventful recovery.

EDGAR (GOLDSTEIN.)

2598

Two Cases of Latent Abscesses of the Brain, Fistulae in the Middle Ear, Operated and Cured. E. LABARRE, *Presse Oto-Laryngol. Belge*, p. 344, Aug., 1911.

Labarre discusses the symptoms, the developmental course of the abscesses, and the prognosis, apropos of his two cases. The author feels that the only hope lies in thoroughly established and well-maintained drainage.

Ed.

2603

Two Unusual Cases of Brain-abscess—Left Hemisphere. E. J. MOURE, *Rev. hebdomadaire de Laryngol. et de Rhinol.*, Jan. 14, and 21, 1911. Abstracted in *THE LARYNGOSCOPE*, p. 947, Sept., 1911.

2604

Intra-cranial Dehiscences of the Cavities of the Ear and Dehiscences of the Aqueduct of Fallopius. J. MOURET, *Jour. of Laryngol. Rhinol. and Otol.*, p. 458, Sept., 1911.

(a) Intracranial dehiscences of the cavities of the ear. These dehiscences are explained on the basis of the development of the roof of the middle ear. As to their frequency, it is suggested: "(a) That in the adult dehiscences of the petro-squamous cranial angle are constant, but more or less obvious and variable in number; (b) that the petro-squamous fissure is constant in the young child; (c) that dehiscences in the roof of the Eustachian tube are fairly frequent and more common than the worm-hole dehiscences of the tympanic roof; (d) that dehiscences of the Gasserian fossa are almost constant, but more or less small and more or less numerous; (e) that dehiscences of the petrous cortex, either at the level of the petrous cells or at the level of the spongy tissue of the tip, or at the level of the superior semi-circular canal, are less frequent, but not rare." These findings offer an explanation of paralysis of the external motor oculi in the course of acute otitis, primary phlebitis of the

petrous and cavernous sinuses, trigeminal neuralgia involving the Gasserian ganglion, and of extension of suppurative processes from the labyrinth to the cranial cavity, or vice versa. (2) Dehiscences of the Fallopian aqueduct. These conclusions were reached: "The different dehiscences of the Fallopian aqueduct have a very great but unequal importance in the propagation of suppuration into the cranial interior. The tympanic dehiscences alone favor the passage of pus from the tympanum into the aqueduct. The intra-cranial dehiscences favor its effusions into the cranium, and conduce more especially to the formation of an extra-dural collection, while, if the pus follows the aqueduct up to the bottom of the internal auditory meatus, it easily sets up meningitis on account of the culs-de-sac sent by the arachnoid round the facial and auditory nerves at this part. But whilst an extra-dural, purulent collection is formed on the upper surface of the petrous, proceeding from quite another part of the aqueduct, the hiatus Fallopii and especially the large dehiscence of the intra-petrous part of the facial canal, may also serve as a path of derivation, and direct it towards the bottom of the internal auditory meatus in contact with the same arachnoid culs-de-sac."

EDGAR (GOLDSTEIN.)

2605

The Lymphatics in the Propagation of Otitic Infections in the Interior of the Brain. J. MOURET, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 39, Jan., 1911.

In this article Mouret replies to Tanturris' criticism of his former paper on this subject, presented to the congress at Budapest. Ed.

2609

Access to Otogenic Extradural Abscess. E. RUTTIN, *Arch. f. klin. Chir.*, Bd. 95, No. 1, 1911.

The primary mastoid incision is prolonged forward at a level of about one inch above the concha towards the lateral orbital margin. After division of skin and subcutaneous tissue, the muscles are severed in their posterior part, while the anterior half is pulled forward by means of retractors. Radical mastoid operation is then performed and the root of the zygoma and smaller or larger portion is removed until healthy dura is met. To reach healthy dura in front and inside, a portion of the horizontal part of the sphenoid wing must be resected. In doing this, one may safely progress $1\frac{1}{2}$ cm. downward and inward, without endangering the big nerves and vessels at the foramina of the base of the sphenoidal wing. The middle meningeal artery must not be ligated as it remains attached to the dura, if the bone is carefully removed. The writer applied his method successfully in five cases, which he reports in this paper. As to the diagnostic value of lumbar puncture in otogenic brain abscess, the writer is very skeptical and prefers an exploratory exposure of the dura, with immediate incision of the same, in cases where pathological changes are found. GLOGAU.

2614

Fracture of Base of Skull of Frontal and Facial Bones. Serious Cerebral and Poly-sinusiatal Lesions. Recovery. VAN DEN WILDENBERG, *Arch. internat. de Laryngol., d'Otol. et de Rhinol.*, p. 110, Jan., 1911.

The patient, a woman of 20 years, was found on the road, unconscious, with a very large wound of the forehead, in the depths of which crushed cerebral matter appeared. There is no doubt that the brain was seriously affected in the very region of the lamina cribrosa of the ethmoidal bone where we are wont to consider all cerebral wounds to be of a most dangerous nature. Recovery nevertheless took place finally. A preliminary operation had to be done owing to suppuration of the ethmoid cells and maxillary sinus. About three weeks later a bulging of the lacrimal pouch was noted and an abscess developed, due to caries of the ethmoid bone. After this had been cleaned out, the temperature soon became normal. Finally a cosmetic operation was advised and performed in order to restore the forehead to an almost normal condition. MUNCH.

2622

Gradenigo's Syndrome Terminated by Fatal General Meningitis. FARNARIER, *Marseille med.*, No. 2, 1911.

This syndrome was present in a sailor of 41 years, consequent to an acute suppurative otitis media which had lasted one month and had given rise to violent headaches on the side of the affected ear. Examination of the eye, at the end of two months showed complete paralysis of the right sixth pair; examination of the ear showed only moderate discharge which drained well and occasioned but slight pain. After a few weeks fever developed, together with severe headaches and vomiting; right temporal bone painful to touch; the paralysis still existed as well as the discharge. The day following this development delirium, conjugate deviation of the head and eyes toward the left, spasmodic movement of the arm, temperature 39°. Lumbar puncture; death after a few hours. Apropos of this case the author remarks that Gradenigo's syndrome points usually to a benign prognosis but its reflex nature is not known well enough and should be studied more minutely. Ed.

2623

Influenzal Meningitis and Its Serum Treatment. S. FLEXNER, *Jour. A. M. A.*, July 1, 1911.

Flexner finds influenzal cerebrospinal meningitis more frequent among infants and children than among adults. At times it follows infections of the respiratory tract but often it develops apparent independently. However, it is probably always secondary to a respiratory infection. All of the cases bacteriologically diagnosed at the Rockefeller Institute as influenzal meningitis have resulted fatally. Therefore, experimental investigation was begun resulting in the finding of a therapeutic agent that seemed to influence its course of development, namely, an immune serum prepared in a goat by long-continued repeated injection of virulent cultures of the influenza bacilli. The author feels that it might be well to use this serum in the treatment of spontaneous disease since monkeys in whom daily lumbar injections of this serum were made for three or four days, have been regularly rescued. A further report is promised. Ed.

2624

Meningitis Following Latent Suppuration of the Accessory Sinuses.

GERBER, *Ztschr. f. Ohrenh. u. f. Krankh. d. Luftw.*, Bd. 63, Heft 1, p. 150, 1911.

Woman, aged 30 years, caught cold a week ago (influenza); three days previous to being taken to the hospital she was still able to be about, but then serious symptoms set in—severe headache, pain in the ear, suppuration from the left ear, unconsciousness. Upon examination the findings were: Severe left otorrhea; mastoid process and entire region intensely susceptible to touch; hyperesthesia of entire body; all reflexes pronounced; pulse irregular, Babinski negative. By lumbar puncture a cloudy fluid was obtained in which, microscopically, leucocytes and pneumococci were found. The mastoid was opened. The bone was found to contain numerous cells, but no caries nor pus. Sinus normal, dura grey, not pulsating. Brain puncture produced no pus. Death. Autopsy showed diffuse meningitis, especially in the sulci of the olfactory nerve. Exposure of the accessory sinuses showed pus in all of the ethmoid cells, the right frontal, both antra and the sphenoid sinus. The left frontal was entirely absent. No pus in temporal bone. The cranial infection resulted, therefore, from the sinuses, especially from the ethmoid. The mucous membrane of the sinuses showed the presence of an acute process.

En.

2627

Prognosis in Suppurative Meningitis Complicating Otitis Media. J.

HOLINGER, *Ztschr. f. Ohrenh. u. Krankh. d. Luftw.*, Bd. 64, Heft 1, p. 55, 1911.

Female patient, developed meningitis a few days after acute middle ear suppuration. Mastoid cells and labyrinth were not involved. The process healed under suction treatment. Half a year later, the patient, after a new attack of acute middle ear suppuration, developed again meningitis, which led to her death.

Post-mortem: There was found a congenital dehiscence in the tegmen tympani, around which a scarl was formed by dura, pia and surrounding brain tissue. On the dura, changes of both recent and old origin were noticed. While at the first attack, the process encapsulated itself and recovery took place, at the second there was already formed a locus minoris resistencie, through which the process rapidly spread.

GLOGAU.

2628

Acute Purulent Oto-meningitis, Operated and Cured. P. JACQUES, *Rev. med. de l'Est*, March 1, 1911.

The case reported is that of a man, 21 years old, who had a purulent discharge from the left ear since the age of 3 years. The discharge ceased July 5, 1910, but on July 13, the patient was taken to the hospital with a meningitis. His auditory canal was red and dry, the tympanus covered with a white layer and two polypi hid a large perforation. On July 15, antrotomy was performed. Pus in antrum; complete curette-

ment of the cavity. A fistulous-path leading to a horizontal semi-circular canal was visible, which was incised and drained. Lumbar puncture was performed twice. Cure resulted. The fungosity of the attic and aditus had provoked the retention of the pus. The author calls attention to the fact that the operation for endocranial complications of otitic origin should be performed in two stages. Ed.

2630

Otogenous Pseudo-meningitis. Case of Actino-bacillosis in a Human. G. LAURENS, *Arch. internat. de Laryngol., d'Otol. et de Rhinol.*, p. 35, Jan., 1911.

This case, probably the first of actino-bacillosis in a human being, was that of a child which developed a right suppurative otitis media after an attack of grip. The seventh day after a regular antrotomy, violent headache was complained of on the top of the head, to which Kernig's sign was added the following day. It was without doubt a case supervening meningitis, probably not of auricular but tuberculous origin, as the investigation of the fluid obtained by lumbar puncture seemed to show. About one week after the start of the meningitis another lumbar puncture was made, and the next day the medical attendants were rather surprised in noticing that the child seemed to do somewhat better. Within six days, the little patient had almost fully recovered. Kernig's sign, the stiffness of the neck, the headache, the numbness had gone.

The explanation of this peculiar case was given when cultures made in the meantime from the cerebrospinal fluid showed a microbe ordinarily found only in the cattle in Argentina and called actino-bacillus by Lignieres, who first described it thoroughly. In fact, the boy was of Argentine origin and had lived in Buenos-Ayres. The preparations were submitted to Lignieres, and he confirmed the diagnosis of actino-bacillosis. MUNCH.

2631

Rhinogenic Traumatic Meningo-encephalitis. P. MANASSE, *Deut. med. Wchnschr.*, p. 1888, Oct. 12, 1911.

Injury of the lamina cribrosa, dura and brain, complicated with suppurative meningitis and abscess of the frontal lobe, due to penetration of a knitting needle. Removal of posterior sinus wall, median orbital wall, nasal bone; the frontal process of the upper maxilla, the lamina cribrosa, and the dura were opened. When the dressings were changed, there was often a spontaneous discharge of pus from the frontal lobe. Complete recovery set in rapidly. Ed.

2636

Otitic Meningitis Presenting Unusual Symptoms. S. OPPENHEIMER, *Am. Jour. of Surg.*, July, 1911.

In Oppenheimer's case, the cerebellar meningitis was apparently already present at the time of the mastoid operation, but there were no lesions to show its presence. The aphasia, which also developed, the author explains, as due to the fact that the temporal lobe on the base has no function, and so the upward advance of the disease on the left side results in sensory aphasia. Ed.

2644

Eight Cases of Fatal Meningeal and Cerebral Complications of Suppurative Ethmoiditis. J. A. STUCKY, *Cleveland Med. Jour.*, p. 210, March, 1911.

The following conclusions are drawn: (1) The complication need not be suppurative, yet it may become fatal. (2) The primary seat of the infection is in the ethmoid cells—or their offshoots, the middle turbinate bone—the frontal and sphenoidal sinuses becoming involved secondarily either through extension by continuity of tissue or by blocking of their natural openings long enough for their retained secretions to become purulent. (3) The primary infection in the ethmoid may result in hyperplasia as a result of long continued inflammation and the middle turbinate may undergo polypoid degeneration. The increases in size in the latter condition blocks the natural openings of the remaining accessory sinuses, which communicate with the middle meatus; thus producing pan-sinusitis. (4) Chronic inflammation, thickening, and adhesion of the meninges covering the cribriform plate, probably exist more frequently than is suspected and are the cause of many cases of chronic headache. (5) Symptoms of serous or circumscribed meningitis and cerebritis when the frontal lobes are involved, these parts not being within the motor and sensory area, are misleading and confusing. (6) A similarity of the symptoms was seen in 17 cases. (7) The extension of the infection to the meninges or anterior frontal lobes or cerebrum, sometimes leads to a fatal ending very quickly, but more frequently it is very slow, the patient finally dying from systemic toxemia. Ed.

2650

Spirochetes in the Petrous Bone of a Luetic Fetus. K. GRUENBERG, *Ztschr. f. Ohrenh. u. Krankh. d. Luftw.*, p. 223, Bd. 63, Heft 3, 1911.

Gruenberg has thoroughly examined a 7-8 months fetus and describes the localization of spirochetes in the various regions of the petrous bones—dura of the middle and posterior cranial fossa, labyrinth, middle ear, canalis facialis and canalis caroticus. One of the interesting features is that, apparently, the extensiveness of the tissue changes was not proportion to the number of spirochetes present. Ed.

2653

Douch of Arachnoid Cavity and Lumbar Drainage in Acute Otitic Meningitis. H. ABOULKER, *Rev. hebdom. de Laryngol. d'Otol. et de Rhinol.*, p. 369, April 8, 1911.

Report of a case of advanced meningitis of otitic origin which terminated fatally in spite of the fact that the discharge of the cerebro-spinal fluid discontinued after extensive lumbar puncture and subsequent douching of the arachnoidal cavity from the cranial cavity. The author feels that the best results can probably be obtained only in the earlier stages of the disease and when one avoids a too sudden release of the intracranial pressure. For this latter purpose he advises repeated withdrawals of only small quantities of the fluid (10 ccm.). Ed.

2655**Some Rambling Thoughts Concerning the Radical Mastoid Operation.**F. ALLPORT, *Ann. of Otol., Rhinol. and Laryngol.*, p. 400, June, 1911.

The author's initial incision is still made long, extending from the tip of the mastoid to a point above the opening of the external auditory meatus, and is made fairly close to the concha. No backward incision is found necessary, unless the cerebellum or backward course of the lateral sinus are to be exposed. The author's self-retaining retractors, now made stronger than formerly, are extended to their limit. The advantages are a lessened hemorrhage, a well-exposed field of operation and the non-necessity of an assistant to hold the hand retractors. To remove the cortex of the bone, the chisel should be large and with rounded end, and the bone should be taken off in thin shavings. The author speaks of an occasional peculiarity in the external meatus which he has observed: "The posterior margin of the meatus recedes backwards and upwards, giving the impression of a meatal margin much farther backwards and upwards than is harmonious with the interior anatomy of the bone." The posterior meatal wall is removed at the same time as the contiguous bone and to its base in its outer one-third portion. One means of avoiding the facial nerve and at the same time facilitating later drainage is to enlarge the meatus upward. The author regards the bur, in experienced hands, as "the quickest and safest instrument" to clean out the interior of the bone. A proper assortment of burs should be on hand, and the cavity kept constantly moist to prevent overheating and necrosis. The mouth of the Eustachean tube is "rimmed" out with the electrically-driven bur and the tube itself curetted with a hand bur. The Heath operation is condemned. Dench's plan of skin grafting at the time of operation is suggested.

EDGAR (GOLDSTEIN.)

2662**Avulsion of Nerves for Neuralgia; Thiersch Method.** H. P. COLE, *South Med. Jour.*, p. 795, Dec., 1911.

Case of neuralgia in right supra- and infra-orbital branches of the trigeminal nerve, due to a right antral infection. The trunk of the nerve was cut at the orbital ridge and the distal three inches avulsed. The antrum was also opened and curetted. After a few days the patient left the hospital apparently completely cured.

ED.

2666**Surgical Treatment of Peripheral Facial Paralysis.** EDEN, *Brunns Beitr.*, Bd. 73, p. 116, 1911.

The restoration of the function of the facial nerve following its peripheral paralysis has been undertaken successfully, surgically, either by nerve splicing or by muscle-plastic.

Balance was the first who attempted the splicing of the injured facial with the spinal accessory nerve. Faure in 1898 also reported a series of cases of anastomoses of the facial with the spinal accessory nerves. Numerous similar cases of nerve-splicing have been reported since, in

some of which the facial has been spliced with the spinal accessory; in others with the hypo-glossal nerves. Thus far the results have not been extremely promising, the majority of the cases simply producing a slight improvement in the facial movement. In those cases in which complete atrophy of the involved muscles occurred and where no electric stimulæ induced results, the nerve splicing operation offers no possibilities.

To remedy this muscle-plasty was first undertaken in 1908 by Lexer and Gomoin. Gomoin utilized the sterno-mastoid portion of the sterno-cleido-mastoid muscle, separating same from cleido-occipital portion; the detached muscle-bundle was inserted in a sub-cutaneous tunnel extending to the commissure of the lip and fastened in position at this point; by this means the droop of the corner of the mouth produced in paralysis was held in check by a muscle strand extending to the mastoid process. This method frequently produced facial distortion because of the associated movements in the action of the sterno-cleido-mastoid muscle. A better result was obtained by Lexer and later by Jianu who utilized the masseter muscle for plastic. Recently Lexer utilized a small strand of the anterior portion of the masseter muscle to elevate the paralyzed droop about the corner of the mouth. The muscle strand remains attached to the superior arcus zygomaticus and the free ends are anchored in two tails, one above and one below the angle of the mouth. In another case a small muscle strand was made with the upper base consisting of the anterior portion of the temporal muscle and the free end attached subcutaneously to the lower point of the canthus to correct a pronounced ophthalmos.

Conclusions thus far reached are that muscle plastic is more substantial than nerve splicing and what improvement is obtained is promptly found.

GOLDSTEIN.

2668

Primary Suture in Simple Mastoidectomy. H. HAYS, *Am. Jour. of Surg.*, June, 1911.

As advantages of this procedure Hays mentions greater rapidity in the healing of the wound, the doing away with the painful dressings, and the fact that the cosmetic result is usually better.

Ed.

2673

Method of Filling Excavated Mastoid with a Flap from the Back of the Auricle. H. P. MOSHER.

Original contribution to THE LARYNGOSCOPE, p. 1158, Dec., 1911.

2674

Opening of Cranial Cavity and Exposure of Brain Through Accessory Nasal Sinuses. A. ONODI, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 1, p. 1, 1911.

Abstracted in THE LARYNGOSCOPE, p. 1082, Nov., 1911.

2675

Secondary Efforts to Hasten Healing After Mastoidectomy. H. O. REIK,
Boston Med. and Surg. Jour., March 23, 1911.

Reik observes that mastoid fistulae do not ordinarily require elaborate plastic operations, with the formation and transposition of skin flaps, but may be closed by repeating what was or should have been done at the time of the original mastoid operation, and primary union will almost surely follow the closure of such wounds. If one fears to attempt primary union after mastoidectomy, or if attempts in that direction are attended by failure, this method of secondary closure offers an alternative or a corrective. The wound may be packed at the time of operation in the ordinary way, and at some later date, when sure that the local infection has been controlled, if not eliminated, and that the patient is satisfactorily convalescing, then one can recleanse and close the wound with every assurance of safety and speedy healing. The advantages to be gained are: The saving of at least a month in the time required for healing; the saving of much discomfort for the patient and trouble for the surgeon; and the substitution of a small linear scar for a rather unsightly one with more or less depression.—*Ex.*

2676

So-called Conservative Mastoid Operation with a Description of the Technic of Heath, Bondy and Siebermann. G. L. RICHARDS, *Ann. of Otol. Rhinol. and Laryngol.*, p. 578, Sept., 1911.

Abstracted in *THE LARYNGSCOPE*, p. 283, March, 1912.

2678

Alcohol Injections in the Treatment of Facial Neuralgia. IRVING J. SPEAR,
Md. Med. Jour., June, 1911.

This method of treatment has now been under trial about seven years. According to the author, experience shows that where the nerve is properly injected, in over 90% of the cases immediate relief is obtained. Recurrence may occur in from eight to eighteen months, but some cases are permanently cured with one injection. Two or more injections are required in some cases, and secondary injections are just as efficacious as the primary one. Age is no contraindication to treatment. The solution and method are much the same as that originally introduced by Schlosser. The author follows the technic of Levy and Baudouin. It is necessary to be sure that your case is one of neuralgia, as the treatment is useless in other conditions such as migraine, hysteria, sinusitis, etc. The formula used is alcohol, 80% 3 ss; cocaine hydrochlorate gr. 1/16. This is introduced into the nerve slowly at one injection. The author considers it dangerous to inject the ophthalmic division in the sphenomaxillary fissure. When this branch is involved, he injects the solution at the supra-orbital foramen. The second or maxillary branch is to be injected in the pterygo-maxillary fossa after its emergence from the foramen rotundum. One feels for the posterior border of the orbital process of the malar bone. This is prolonged downward to the lower edge of the zygoma, and at about one-quarter inch posterior to the point

where this line crosses the zygoma, is where the needle is to be introduced. The needle is directed slightly upward, and with gentle force pushed toward the nerve. The author advises to let the needle touch the posterior surface of the superior maxilla, as the surest way to guide the point into the pterygo-maxillary fissure. If the point of the needle is introduced at an angle of about ten degrees above the horizontal plane, and at a depth of four and one-half to five cm., it will come in contact with the nerve. The third or inferior maxillary branch is injected at its exit from the skull in the foramen ovale. The needle is introduced at a point one-third of an inch in front of the tubercle of the zygoma immediately beneath the zygoma. It is directed inward and very slightly upward and will reach the nerve at a depth of 4 cm. A successful injection is indicated by the fact that the portion of the face supplied by the nerve becomes anesthetic. This anesthesia persists for several days. After the injection the patient may complain of numbness, stiffness, headache and soreness but these effects are not permanent.

WELLS.

2682

Improved Technic of the Thiersch Graft Following the Radical Mastoid Operation. C. F. WELTY, *Arch. internat. de Laryngol. d'Otol et de Rhinol.*, p. 70, Jan., 1911.

Welty is using Thiersch's skin-grafts as a routine in every case where he has performed radical mastoid operation. He has done so at various intervals after the original operation, but he believes the fourth day to be the proper time for filling up the bone cavity. After cleansing the operative field, all granulations should be curetted off, then hot saline solution, hydrogen dioxide or adrenalin applied in order to obtain a most perfect hemostasis. The grafts should be taken from the leg, about half an inch broad and one inch and a half long. From three to four grafts will usually do. The first one is to be applied to the bottom of the tympanic cavity, posteriorly; the second one below, to the rear of the facial nerve into the mastoid cavity; the last ordinarily fills up the remaining part of attic and antrum. Smaller supplementary grafts may then be used if necessary. Dressing is done with cotton swabs, then with gauze soaked in liquid paraffin. Among twenty-one cases operated upon by the author, three only were excluded from skin grafting owing to labyrinthine or meningeal complications. Post-operative vertigo was observed in several of the eighteen other cases. These were cured, four within three weeks, ten within four weeks, and four within six weeks, which, of course, seems quite a record, as the author himself claims it to be.

MUNCH.

2685

New Aduit Cannula. C. A. ADAIR-DIGHTON, *N. Y. Med. Jour.*, p. 1308, Dec. 23, 1911.

The advantages claimed for this cannula are, that it is simple, jointless, cheap, can be bent to any angle; it can be attached to any ordinary Higginson's syringe. Dighton introduced it for the mastoid operation but it can also be used in nasal accessory sinus cases.

Ed.

2687

An Improvement in Audiometers. F. A. FAUGHT, *Med. Rec.*, Feb. 18, 1911.

The underlying principle of Faught's audiometer is that sounds produced within an air-tight cavity may be conveyed to the ears by flexible tubes. When these sounds are just audible they give an acuity of hearing. Their intensity is varied at will. Ed.

2688

The Phonendoscope As An Acumeter. G. FERRERI, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 827, May, 1911.

In demonstrating the possibility of using the phonendoscope as an acumeter Ferreri introduces a very practical means of making functional ear tests, and one within the reach of all physicians. Ed.

2690

Microphonic Apparatus for Re-educating the Deaf Ear. LAIME, *Presse Med.*, March 22, 1911.

The microphone is composed of three parts: (1) An amplifying transmitter; (2) an ear-receiver; and a small battery which can easily be put in a pocket—all united. When using, the patient places the receiver to his ear while the speaker talks into the transmitter, the patient being able to regulate the intensity of the sound. Though at first sound will not be perceived by some deaf patients, gradually they learn to perceive the sound and to differentiate. The method of procedure should be modified according to the varieties of deafness. The author holds there is but one contra-indication to the method, namely, labyrinthine affections. Even deaf-mutes, according to Lalme, may learn music and be enabled to carry on conversation. Ed.

2692

Modified Aural Speculum, Especially Adapted for Incision of the External Canal. D. C. SMYTH.

Original contribution to THE LARYNGOSCOPE, p. 24, Jan., 1911.

2693

Apparatus for Controlling the Volume of Whispers. A. STEFANINI and TONETTI, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 285, May-July, 1911.

This apparatus is a new phonometer by which, the authors states, the hearing power can be measured. The merits claimed for this apparatus are: Facility in examination; accurate results, and the fact that the size of the room does not interfere with the measurements. It is especially indicated in medico-legal work in determining the exact diminution in the hearing due to injuries of trade or accidents. Ed.

2695

Practical Value of Prof. Gaertner's Rhinometer. OSKAR BENESI, *Monatschr. f. Ohrenh.*, p. 1337, Bd. 45, Heft 12, 1911.

The apparatus consists of a system of three communicating chambers. The middle chamber, by means of a tube attached to its top, is

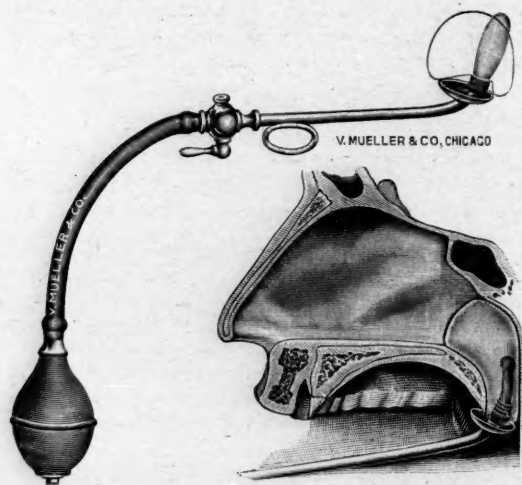
filled with air to such an amount that the water in the lateral chambers rises to a certain mark. If the said tube is introduced into one nostril, the air from the middle chamber, being under the pressure of the water in the lateral chambers, will go backwards into the nasopharynx and leave through the other nostril. With the air escaping from the middle chamber, the water in the lateral ones drops till it reaches the lower mark.

The author, at Prof. Alexander's clinic in Vienna, examined a series of cases comprising the different causes of nasal obstruction, and found that the above apparatus enables us to precisely define the amount of obstruction and to obtain an objective indication for operation by measuring and comparing the time which it takes in different cases before the water drops from its highest level to its lowest. While it normally takes six to seven seconds in the adult and seven to eight seconds in the child, there is much more time needed where there is a nasal obstruction. Thus, for example, it takes in: Large adenoids and tonsil, 86 seconds; large adenoids on right side, 30; large adenoids on left side, 20; spinal septi and hypertrophied inferior turbinate on right, 30; while on left nearly normal, 10. The author believes that the rhinometric test in children will do away with the cruel method of digital examination for adenoids.

GLOGAU.

2696

Self-retaining Post-nasal Hemostat. H. B. BOETTCHER, *Jour. A. M. A.*, p. 1994, Dec. 16, 1911.



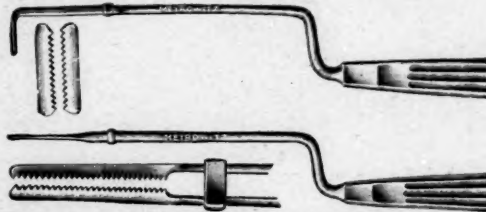
The instrument consists of a cannula, 10 inches long, bent up to almost a right angle at the small end, over which there is a small rubber bag, fastened with a silk thread. At the other end there is a rubber

tube, 6 inches long, to which an air bag and stopcock is attached. It is introduced immediately after all post-nasal operations, and inflated to completely fill the space. The stop-cock is then turned, and the bag left in place for two or three minutes—a period long enough to check hemorrhage in the average adenoid operation. Ep.

2703

New Instruments for the Submucous Removal of the Deflected Bony Septum. OTTO GLOGAU, *Zeitschr. f. Laryngol., Rhinol. u. ihre. Grenzgeb.*, p. 569, Bd. 4, Heft 5, 1911.

To precisely remove a measured portion of the bony deviation, the writer invented two submucous saws, a horizontal and a vertical one. Both instruments are of bayonet shape, consisting of a four-inch long handle and a shank whose fork-like end is raised three-quarters of an inch above the former. The fork is two inches long and contains at its end "Glogau's submucous saw," in the one instrument of a horizontal, in the other of a vertical direction. There are two saws on each of the instruments, one on each blade of the fork, facing each other and fitting into one another. The saw blades are bent concavely to each other at their proximal end, and can be kept in close touch with the bony deviation by means of a ferrule. The sawing surface of the horizontal instrument is one inch. The end of the vertical instrument is bent at a right angle, and the vertical portion of the fork, one-half inch long, contains within its blades the two vertical saws. The instruments are made by Meyrowitz, N. Y. The *modus operandi* is the following:



After having made accessible the entire deviation by separating it from both perichondrium and periosteum in the usual way, the cartilaginous deviation is removed with the swivel knife. The horizontal submucous saw is then slipped over the bony structure along the upper margin of the deviation, whereafter by horizontal sawing movements the bone, in the grasp of the two blades, is sawn through. The instrument is then slipped over the lower margin of the bony deviation, which is sawn through in the same way. Now the vertical submucous saw is slipped over the bony deviation, backward to its posterior margin, where by vertical movements the bone is sawn through and removed in one piece.

To make the operation more rapid, the saws applied on the bony structure in the above mentioned way, need not go through the bone, it being sufficient to make a more or less marked indentation, the same as a glazier breaks off the amount of glass wanted, by grooving the surface with his diamond.

A. A.

2709

Continuous Suction in Treatment of Nasal Disease. A. PEYSER, *Berl. klin. Wchnschr.*, July 17, 1911.

Peyser's apparatus can be used for all the diagnostic and therapeutic purposes in which those of Politzer and Sondermann are applicable, and has the advantages of being continuous and regulated exactly by a manometer. Ed.

2712

Tubular Soft Rubber Nasal Splint Through Which the Patient Can Breathe. M. D. STEVENSON, *Jour. A. M. A.*, p. 725, Aug. 26, 1911.

The nasal splints which Stevenson uses are made of a strong, soft, flexible rubber. The splints can be adapted to the location, can be made in various widths and thicknesses and can be kept sterile and ready for use in a weak solution of formaldehyde and may be easily introduced by means of alligator forceps. Adhesive strips may be employed to hold these splints in place. They have an especial advantage after septal operations. If necessary one may be inserted into each nostril. Ed.

2713

A New Needle for Endo-nasal Sutures. L. TORRINI, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 4, Jan., 1911.

A small, curved needle is fastened in an adjustable handle. The needle has a long slit in it and the eye close to the point. LASAGNA.

2715

Speculum for the Direct Examination and Treatment of the Naso-pharynx and Eustachian Tubes. S. YANKAUER.

Original contribution to THE LARYNGOSCOPE, p. 173, March, 1911.

2716

New Pharyngoscope. M. ANDRE, *Ann. des. Mal. de l'Oreille du Larynx du Nez et du Pharynx*, p. 338, No. 4, 1911.

Andre's pharyngoscope differs from that of Hays', in that the former is equipped with an articulating mirror which can be deflected in all directions under the guidance of the handle. Ed.

2717

New Tongue-depressor For Holding Down Palatal Arch During Removal of Tonsils. CALDERA, *Rev. espan. de Laringol.*, Jan., 1911.

The chief advantage of this instrument is that it is so constructed that the operative field remains in full view. Ed.

2718

New Combination Mouth-gag and Tongue-depressor. R. A. COFFIN, *Boston Med. and Surg. Jour.*, p. 445, Sept. 21, 1911.

Coffin describes a new instrument in which he combines the features of a mouth gag and a tongue depressor. By this means he is able to dispense with an assistant to depress the tongue, and has his own hands free for the unhampered performance of a tonsillectomy or a cleft-palate operation. BERRY (MOSHER.)

2724

Two Well-known Tonsil Dissectors Mounted in Convenient Form on a Single Handle. C. M. HARRIS.

Abstracted in *THE LARYNGOSCOPE*, p. 177, March, 1911.

2727

Tonsil Separator. B. HIGBEE.

Original contribution to *THE LARYNGOSCOPE*, p. 1094, Nov., 1911.

2730

New Tongue Depressor. D. W. LAYMAN.

Original contribution to *THE LARYNGOSCOPE*, p. 176, March, 1911.

2731

New Tonsil Knife. OLIVER H. LOTHROP, *Boston Med. and Surg. Jour.*, p. 153, 1911.

Lothrop represents a new tonsil knife, resembling a bistoury, with a blunt olive tip, which is turned up at right angles to the cutting edge. This tip permits him to engage the knife under the edge of the plica and sever it and the pillars from the tonsil in one circular sweep.

BERRY (MOSHER.)

2733

New Instrument For Safely Opening Abscesses of Bucco-pharyngeal Cavity. U. J. METZIANU, *Bull. d'Oto-Rhino-Laryngol.*, p. 123, April, 1911.

The advantages claimed for this instrument are that it is so inoffensive looking that patients never shy it and also that the slightest movement on the part of the patient terminates the operation without any danger.

Ed.

2740

New Instrument to Remove the Nasal Wall in Cases of Empyema of the Maxillary Antrum. H. A. ALDERTON.

Original contribution to *THE LARYNGOSCOPE*, p. 1095, Nov., 1911.

2741

Set of Antral Cannulae. J. DUNN.

Original contribution to *THE LARYNGOSCOPE*, p. 168, March, 1911.

2743

Motor Maxillary Sinus Trocar. W. GUTBERLET. *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 3, p. 524, 1911.

The author describes and illustrates a new motor apparatus devised for opening the maxillary sinus.

Ed.

2747

New Instruments. J. J. SULLIVAN.

Original contribution to *THE LARYNGOSCOPE*, p. 106, Feb., 1911.

2749

An Antroscope-trocar. ELENIEK VON TOVOLGYI, *Arch. f. Laryngol. u. Rhinol.*, Vol. 25, No. 1, p. 144, 1911.

The instrument is a combination of the antroscope used for the inspection and exploring of Highmore's antrum, with a fitting trocar. Its introduction is through the inferior meatus according to the Krause-Mikulicz method. To protect its lamp, introduce the antroscope into the trocar with its window backwards until the antrum is punctured, when it is withdrawn, 1—2 mm. rotated forwards and pushed into the open extremity of the trocar. With its aid, the author is enabled to determine the extent and character of any inflammatory process and in the absence of an exudate, the condition of the mucous membrane may be definitely ascertained.

STEIN.

2751

The Glossograph. An Automatic Recorder of Speech. AMADEO GENTILI, *Volta Rev.*, April, 1911.

The glossograph consists of a transmitter and a receiver. The transmitter is attached by two little hooks to the lower teeth. It consists of two slender, elastic levers that enter the mouth, one being longer than the other, and extending to the back of the tongue. The shorter is only actuated by the front of the tongue. Two other levers are approximated by the closing of the lips. A feather vane reacts by expulsion of breath. Another flexible lever is inserted between the collar and the throat to recognize voice. By means of an attachment similar to the nose clip of an eyeglass the nasal vibrations are caught. These various levers actuate electric contacts and are actuated by the guttural lingual, labial, nasal and breath elements of speech. The transmitter is connected by electric wiring to the receiver, which consists of six points resting upon a revolving cylinder covered with carbon paper. These points trace irregular lines upon the surface of the carbon-covered cylinder, the irregularities corresponding to the activities of the six lever contacts of the transmitter. One line, therefore, records all guttural sound, the others the front lingual, labial, nasal, voice and breath sounds. A vertical section of the six lines will show all vocal activities associated with a given sound, and with a little practice the record can be deciphered and translated into ordinary written or spoken symbols.

The inventor is Mr. Arnadeo Gentile, C. E., Villa Quisisana, Nervi, Italy.

WRIGHT.

2752

New Inhalator. F. LASAGNA, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 318, July, 1911.

Lasagna designed this apparatus particularly, to be used at the large resorts where hydro-mineral "cures" are taken. It is very simple, combines the features of both Bulling's and Siegle's apparatuses, and is so devised that the temperature of the inhalations can be regulated at will. Sufficient force may be used in the apparatus to penetrate the medication even into the lower air passages.

ED.

2754

New Esophagoscope; Preliminary Communication R. LEWISOHN, *Jour. A. M. A.*, p. 1681, Nov. 18, 1911.

This new instrument greatly simplifies esophagoscopy, and makes it more safe. The esophageal tube is rectangular; the image is transferred by a mirror at the rectangular junction and the light is reflected down the tube by means of a mirror in the eye-piece. Ed.

2755

Tube for Closing and Removing an Open Safety-pin. H. P. MCSHER, Original contribution to *THE LARYNGOSCOPE*, p. 1021, Oct., 1911.

2762

New Vest Pocket Head-lamp. H. HAYS, *N. Y. Med. Jour.*, p. 1212, June, 1911.
Abstracted in *THE LARYNGOSCOPE*, p. 1101; Nov., 1911.

2769

Hydro-therapy in Rhino-laryngology and Dry Powdered Dust. U. AMBROSINI, *Arch. ital. di Otol. Rhinol. e Laringol.*, p. 202, May, 1911.

The author describes two apparatus for inhalation; in the one an atomizer is connected to a compressed air tank; in the other the atomizer is enclosed in an electrically-heated compartment that serves to dry the wet spray. With this apparatus a dry medicated air is produced, formed of very small crystals that can enter even into the alveolar ramifications of the lungs. LASAGNA.

2772

Observation on Sound Production and Sound Conduction Along the Respiratory Tract. J. H. BARACH, *Am. Jour. Med. Sci.*, p. 531, Oct., 1911

Barach found that the "bronchial breathing" heard at the acromial end of the clavicle has its origin at the manubrium sterni, which receives sound vibrations from the trachea behind. The cavernous breathing heard over the cranial bones, particularly the occipital, has its source of origin in the nasal fossa which acts as a resonator. In the nasal fossa, the nasal resonator, a definite amount of sound is produced, and this sound added to the sound wave created along the lower portions of the respiratory tract, makes up the "sound total," which is heard when auscultating. That the nasal resonator is an active factor in auscultatory sound production is readily appreciated by observing the weakening of the respiratory sounds which occur when its action is eliminated. From this it is evident that auscultatory sound production does not begin at the larynx. This, too, shows that the examiner must take into careful consideration the condition of the nasal resonator, and whether the mouth is opened or closed, in the proper interpretation of his auscultatory findings. The observations on tracheotomy cases throw light on the part played by the larynx, which seems to be of less importance than is generally believed. They show that elimination of the larynx results in modification of the pitch and volume of the bronchial and vesicular sounds, but the essential characteristics of these sounds remain unchanged.—*Ex.*

2774

Radiography in Oto-laryngology. J. C. BECK.

Special editorial department, *THE LARYNGOSCOPE*, p. 1027, Oct., 1911.

2777

Salvarsan in Rhino-Laryngology. BILANCIONI, *Policlin. sez. prac.*, Aug. 6, 1911.

In the presence of syphilitic manifestations in the nose, throat, and oral cavity Bilancioni used salvarsan and, according to his reports, attained good results. He advises its combination with iodid and mercury treatment.

Ed.

2781

Use of Antiformin in the Examination of Sputum for Tubercle Bacillus.

W. W. BOARDMAN, *Bull. Johns Hopkins Hosp.*, July, 1911.

The author feels that the use of sodium hypochlorite (antiformin) in the examination of sputum for tubercle bacilli will do much to reduce the percentage of doubtful cases.

Ed.

2782

Percussion Signs of Persistent or Enlarged Thymus. T. R. BOGGS, *Arch. of Inter. Med.*, Nov. 15, 1911.

Bogg made the thymus dullness shift in the following manner: The chin is depressed toward the sternum, the dullness is outlined behind the manubrium and in the interspaces; then the head is retracted as far as possible toward the median line of the back. On repeating this procedure the lower border of the dullness will be seen to have shifted upwards, often as much as an interspace or more. On again depressing the chin the dullness assumes its former position.

2789

Further Uses of the X-ray Flash. E. D. BROOKS, *Jour. of Ophth., Otol. and Laryngol.*, p. 412, Nov., 1911.

This is a report of the treatment by the X-ray flash of several cases of otorrhea, goiter (simple and exophthalmic) and sinusitis. In some of the cases there was apparent success.

EDGAR (GOLDSTEIN.)

2797

General Anesthesia in Oto-rhino-laryngology. Technic Used at the Lariboisiere Hospital. A. BUGEAU, *These de Paris*, 1911.

For short operations the author strongly recommends ethyl of chloride with a Camus mask, and shows the advantages of this procedure. If a more lengthy anesthesia be desired ethyl chlorid administered before the chloroform abolishes the period of anxiety preceding the narcosis and thus gains time. A Camus mask adapted to a Ricard apparatus facilitates the administration of this double anesthetic. In very long operations the modifications of the Trendelburg apparatus are useful.

Ed.

2799

Tannoformium in Oto-Rhino-Laryngology. C. CALDERA and M. GAGGIA.
Arch. ital. di Otol., Rinol. e Laringol., p. 265, No. 4, 1911.

The authors have used an alcoholic solution or powder of tannoformium in numerous cases of otitis. The ear is carefully dried and cleaned and a 1 per cent alcoholic solution of tannoformium is instilled until the secretion becomes very slight, or, tannoformium powder is insufflated when but a small quantity of pus is present. Tannoformium is contra-indicated in acute inflammations and in caries. Observations in vitro have shown that tannoformium has a stringent, but not an antiseptic, action.

LASAGNA.

2800

Vaccine Therapy in Oto-rhino-laryngology. CALDERA, *Internat. Zentr. f. Ohrenh.*, Bd. 9, Heft 4, 1911.

Caldera reports on the results of vaccine therapy thus far obtained in the treatment of acute or chronic cases of purulent otitis media, coryza, sinusitis, facial anthrax with angina Ludovici, tonsillitis, peri-tonsillar abscess, pyemia and sepsis. The author concludes that the evidence thus far hardly proves that this therapy is as valuable as some assert, in fact that it has entirely failed in many instances.

Ed.

2803

Effect of Salvarsan in Syphilis of the Upper Air Passages. O. CHIARI,
Berl. klin. Wchnschr., p. 1587, Aug. 28, 1911.

This report is based on experiences with salvarsan in fifteen cases of syphilis of the upper air passages; all the cases recovered without complications. Both the intravenous and intramuscular methods of injection were employed. Chiari recommends paraffin emulsion for the intramuscular injection, the area between the shoulder blades being the best region for this injection.

Ed.

Reviewed on p. 45 of Dr. Emil Mayer's article on "Treatment of Cicatricial Stenosis of the Larynx," published in the January, 1912, issue of THE LARYNGOSCOPE.

Ed.

2808

Coagulation-time of Blood as Affected by Various Conditions. J. SOLIS-COHEN, *Arch. of Inter. Med.*, Nov.-Dec., 1911.

The consideration of this subject is taken up under the following headings: (1) Methods employed for measuring the clotting-time of blood; (2) Clotting-times according to the different methods; (3) Factors affecting the clotting-time of shed blood; (4) Intrinsic factors, probably affecting the blood within the vessels;; (a) external conditions (meteorological); (b) conditions affecting the blood itself; (c) normal conditions affecting the body as a whole; (d) pathological conditions of the body influencing the clotting-time; (e) factors introduced into the body from without. Among other conclusions is this: "The coagulation time of the blood within the vessels is shortened by strontium lactate, magnesium carbonate, blood transfusion, extract of the posterior lobe of the

pituitary gland, kidney extract, ovarian extract, testicular extract, zymoplasma, and possibly by per-salts of iron and hydragogues; it is lengthened by citric acid and the citrate; extract of the anterior lobe of the pituitary gland, liver extract, gastro-intestinal extract, extract of spleen, extract of pancreas, extract of suprarenals, chloroform in certain doses, leech extract, Witte's peptone, and possibly colchicin, nuclein, beta-naphthylamin, atropin, bromids, phosphorus and curare. No constant effect on the coagulation-time of the blood has followed the introduction into the body of calcium salts, milk, sodium chlorids, blood-serum, thyroid extract, extract of thymus gland, alcohol, carbon dioxid, and gelatin. The absence of uniformity in the results obtained with several of the last group of substances may be in part due to the fact that they have been investigated by a large number of observers, which increases the opportunities for error."

EDGAR (GOLDSTEIN.)

2813

Serologic Differential Diagnosis of Whooping Cough. A. DELCOURT, *Arch. de Med. des Enf.*, Jan., 1911.
Abstracted in THE LARYNGOSCOPE, p. 809, July, 1911.

2819

Latent Hypertrophy of the Thymus. L. D'OELSnitz, *Bull. de la Soc. de Ped.*, Dec., 1911.

D'Oelsnitz enumerates as diagnostic signs: A puffy, pale aspect, cyanotic complexion, bluish tint around mouth, prominent veins, hypertension of fontanelles, labored respiration, stridor, extensive dullness over manubrium toward the left. The diagnosis can usually be substantiated by roentgenoscopy.

Ed.

2822

Disastrous Local Reactions After Salvarsan in Diseases of Upper Air Tract. W. EHRLER, *Monatschr. f. Ohrenh. u. Laryngo-Rhinol.*, p. 1045, No. 9, 1911.

Four cases are reported. Ehrler holds that if advanced bone or cartilaginous processes in the cranium or larynx be present, great care should be taken in the use of salvarsan, since the reaction may endanger neighboring vital organs.

Ed.

2828

Arsenobensol in Syphilis of the Upper Air Passages. FALLAS and HICQUET, *Polyclinique*, No. 10, 1911.

Report of three cases in which excellent results were obtained after the injection of arsenobensol, though mercury and iodid therapy had been without avail. The authors have great confidence in the cicatricial value of arsenobensol in tertiary lesions in the mucous membrane of the upper air tract and recommend that it be used in stubborn or severe cases. After a cure has been effected an interval of several weeks is allowed to elapse and then a combination of the older therapy is used intermittently.

Ed.

2829

Salvarsan in Oto-rhino-laryngology. E. FELIX, *Ann. des Mal. de l'Oreille, du Larynx, du Nez et du Pharynx*, p. 653, No. 7, 1911.

Felix reviews the reports on the use of salvarsan in bucco-pharyngeal syphilis and points out the excellent results. Besides syphilitic cases, two successfully treated cases of leukoplasmia are reported. Lepra and scleroma did not respond to treatment, while "606" was of advantage in the treatment of scurvy and Vincent's angina. In the ear it should be used only after a thorough examination has been made to determine whether the acoustic nerve can withstand the reaction. Ed.

2830

Albumino-reaction in the Sputum, Diagnostic of Tuberculosis. FERREIRA, *Presse Med.*, April 19, 1911.

Ferreira's experiences confirm those of others who have found that a negative albumino-reaction in the sputum excludes tuberculosis, while a positive one does not necessarily establish the diagnosis. Ed.

2831

Bacteriology of Whooping Cough. G. FINIZIO, *Ztschr. f. Kinderh.*, Aug., 1911.

The Bordet-Geugon bacillus is found almost constantly in the sputum of children sick with pertussis, especially at the beginning of the disease. The blood-serum shows an agglutination not always constant for the Bordet-Geugon bacillus, but when present it is quite high. The agglutination is more constant in the serum of patients who have just passed through the disease. These bacteriological and sero-logical facts confirm the specificity of the Bordet-Geugon bacillus in pertussis. Ed.

LIPPMAN (GOLDSTEIN.)

2834

Mediastinal Causes of Chronic Cough in Children. H. FRENCH, *Lancet*, Sept. 9, 1911.

A chronic non-productive cough in children was observed to be associated in some cases with a chronic enlargement of the lymph nodes at the bifurcation of the trachea. The mechanical pressure and irritation produced on the phrenic nerve is given as the probable cause of this cough, as well as the cough that is often associated with dilation of the heart. Treatment is based on the fact that such enlarged lymph nodes are generally tubercular. EDGAR (GOLDSTEIN).

2836

Radium Treatment of Malignant Tumors of the Upper Respiratory Tract. FREUDENTHAL, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 1, p. 3, 1911.

Freudenthal has used radium frequently in the treatment of ulcers and malignant tumors. The best results were obtained with the former class of cases. Radium treatment is only indicated in inoperable cases of malignant tumors, especially in tumors in the maxillary sinuses or nasal

cavity. The author discusses the method of treatment and quantity used. The latter, as well as the duration of the application, vary according to the case.

Ed.

2838

Position of Laryngology and Rhinology in Medicine. R. FULLERTON, *Glasgow Med. Jour.*, Feb., 1911.

Abstracted in *THE LARYNGOSCOPE*, p. 868, Aug., 1911.

2848

Remarks on the Spontaneous Disappearance of Malignant Growths. J. W. GLEITSMANN, *Med. Rec.*, April 22, 1911.

Gleitsmann calls attention to the importance of the observations made on the spontaneous disappearance of malignant growths. He cites much of the literature on this subject which taken collectively presents a formal array of authentic case-reports in which malignant neoplasms definitely determined by clinical examination, have been corroborated by expert microscopic findings and have spontaneously disappeared while the cases have been under careful observation.

GOLSTEIN.

2851

Personal Impressions, Experiences and Comments. M. A. GOLDSTEIN.

Special editorial department, *THE LARYNGOSCOPE*, p. 965, Sept., 1911.

2852

Electric Status of Nebula Produced by Means of the Dry Stefanini-Gradenigo Apparatus. GRADENIGO and STEFANINI, *Arch. ital. di Otol. Rinol. e Laryngol.*, p. 390, Sept., 1911.

Metallic nets were placed at a distance of from 5 cm. to several meters from the tip of the nebulizer. Measurements made by means of an electroscope fixed to the net demonstrated that the nebula produced by this apparatus maintained the electric charge for a long time.

LASAGNA.

2862

Actinomycosis in Norway. F. HARBITZ and N. B. GRONDAHL, *Norsk. Meg. f. Legevidensk.*, Jan., 1911, and *Am. Jour. Med. Sci.*, p. 386, Sept., 1911.

The authors have studied the prevalence, pathology, anatomy, bacteriology and therapy of actinomycosis. They have not been very successful with sero-therapy, but urge further investigation. Eighty-seven cases are reported.

Ed.

2864

Bacteriology of the Sputum from the Lower Respiratory Tract. HASTINGS, and NILES, *Jour. Exper. Med.*, p. 638, 1911.

The authors draw their conclusions from a study of 183 cases, from which they made 341 cultures. Their work covers a period of seven years. They used every possible precaution to obtain uncontaminated sputum from the respiratory tract below the epiglottis. Though the

prevalence of the various bacteria varied from year to year, nevertheless an average showed the presence of the micrococcus catarrhalis in twenty-one per cent of the cases. The aureus and streptococcus ranked next, and then the pneumococcus. In several cases of lobar pneumonia no pneumococci were found and the authors conclude that other bacteria may be the cause of this affection.

Ed.

2882

Alcohol Injection in Tri-facial Neuralgia. F. C. KELLER, *N. Y. Med. Jour.*, p. 14, July 1, 1911.

Keller based this article on a study of forty-eight cases, in which the disease had prevailed from three months to forty-seven years. In only five of the cases the injection afforded no relief, in two the pain recurred within two months. In most instances, however, relief was obtained for several months, sometimes for as long as two years. In case of recurrence another injection was made.

Comparing this method with nerve-resection leads Keller to conclude that a successful injection or series of injections is followed by relief for about the same length of time as that following a first resection of a peripheral nerve. Re-injection for recurrence gives a longer period of relief than a repeated resection.

Ed.

2889

Blood in Percussis. J. A. KOLMER, *Am. Jour. Dis. of Children*, June, 1911.

This is a study of twenty-seven cases of whooping cough in St. Vincent's Home, with respect to the number of leucocytes and of the varieties thereof in the five stages, viz., (1) precatarrhal; (2) catarrhal; (3) paroxysmal; (4) marked improvement; (5) two months later.

There is found an increase in the number of leucocytes, and an absolute, as well as relative increase in the lymphocytes reaching the maximum in the paroxysmal stage. Among the complications studied were: (1) pneumonia; (2) convulsions; (3) Vincent's angina; (4) impetigo contagiosa, and (5) ecthyma. A careful leucocyte count, but especially a differential count is considered of distinct diagnostic value.

EDGAR (GOLDSTEIN.)

2894

The Bacteriologic Conditions of Santaria for Nebulization by Iodin Waters. LASAGNA and BOCCHIA, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 132, March, 1911.

The increasing number of inhalatoria has induced the authors to investigate the hygienic conditions of these institutions. The hall in which these experiments were made had a capacity of sixty persons, and was filled with a dense and damp vapor of salsomaggiore. From numerous bacteriologic investigations, it was demonstrated that when the atmosphere of this room was saturated with this vapor for a short time, the number of micro-organisms in suspension greatly diminished. This is due to the condensation water depositing on the walls and by fall-

ing purifying the air. From examinations of the water used, it was found that its germicidal nature was due to the salts it contained.

LASAGNA.

2900

Non-caustic Cresol (Cresatin) in Diseases of the Nose, Throat and Ear.

M. D. LEDERMAN.

Original contribution to *THE LARYNGOSCOPE*, p. 169, March, 1911.

2909

Infant on Whom Thymectomy Was Performed. LORTHIOIR, *Ann. de la Soc. Belge de Chir.*, Nov. 25, 1911.

The infant was 3 months old, in a very debilitated condition; respiration difficult. Sub-sternal pressure produced a strong depression in the anterior and inferior part of the thorax. The velum palati presented a congenital cleft and the inferior maxilla was atrophied. Operative removal of thymus under chloroform; no unusual operative sequelae. After the operation the child was much improved; respiration easier, digestion better; weight increased. Of course the ultimate effects of the operation can not be stated at present, but the author feels that they will continue to be satisfactory.

Ed.

2917

Menthol Fatal to Young Infants. L. MAYET, *Prov. med.*, Feb. 18, 1911.

Mayet remarks on the serious effects caused by the introduction of menthol into the nasal fossae of nurslings. Two cases of asphyxiation were observed. Such accidents have also been reported by Drs. A. Delille, Guinon, Ausset, Koch, Killian, Gomet, Estape and Mme. Nageotte Wilbonchewitch. All of the cases have similar histories. Soon after the introduction of the menthol, the infant suffered characteristic spasm of the glottis with apnea; then fruitless inspiratory efforts, the glottic stenosis continuing for fifty seconds, the face became cyanosed, the eyes convulsed and syncope set in. The child was only saved by cold douches, intense revulsion and cleaning out of the naso-pharynx which was filled with mucus.

2918

Case of Cavernous Angioma of the Face. G. MCCALLUM, *Australian Med. Jour.*, Sept. 9, 1911.

Since 10 years, man aged 29 years, had noticed "tingling sensation" at left half of upper lip radiating to the ear. The trouble was at first attributed to a decaying tooth, but its removal produced no relief. The swelling extended, but operative intervention had to be abandoned because of severe bleeding. When the author saw the case he found an extensive tumor which seemed to occupy all the region of the maxillary bone radiating from it in all directions. McCallum introduced arrows of magnesium metal into the tissues, which stimulate chemical changes by which the metal is absorbed—in about two to three weeks. Cicatrization follows with diminution in size of the area. The treatment is administered under local anesthesia and causes no ill effects. In the present case, 100 arrows in all were used about six at a time. The patient is still well—over five years after treatment.

Ed.

2922

Intercurrent Vaccination to Abort Whooping-cough in Infants. MEHNERT, *Jaheb. f. Kinderh.*, June, 1911.

Mehnert reports remarkable results from the use of vaccination in pertussis. Of course the children must be isolated to protect them from further infection. If the cases come under observation only in the later stages of the infection, venesection may also be necessary, in addition to the vaccination. The author urges postponing the vaccination of infants until after their first year, so that if an epidemic of whooping-cough breaks out, dual action of vaccine may be utilized. Ed.

Ed.

2930

Ethyl-Bromide-After-Intoxications. F. MOUNIER, *Bull. d'Oto-Rhino-Laryngol.*, p. 29, Jan., 1911, and *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 54, Jan., 1911.

Seven hours after having been operated upon under bromide of ethyle anesthesia for adenoids, a young boy, three years of age, starts vomiting, about one hour after having taken some vegetable broth. Hydric diet and a bowel irrigation were prescribed. Nevertheless, the boy's state seemed to grow worse, and the following morning he looked very ill. He was unconscious. Vomiting had ceased, but there was almost complete anuria, and the breath had an exceedingly bad smell. The pulse being still quite regular, the case was not declared desperate. In fact, he recovered slowly. Secretion of urine returned on the evening of the second day. For some time yet, the child showed a very peculiar state of intense anemia.

MUNCH.

2950

Actino-bacillosis in the Form of Meningitis in an Argentine Citizen. P. RAVAUT, *Presse med.*, Jan. 21, 1911.

The aural affection was consecutive to grippe, and a mastoid operation was performed. The patient was convalescent when he presented all the symptoms of a meningitis. Lumbar puncture gave a clear liquid which, however, contained lymphocytes, large mononuclear and some polynuclear leucocytes. A culture showed the presence of the actino-bacillus. This bacillus is found occasionally in animals in Argentine, but not often in the human. The patient recovered after a second lumbar puncture.

Ed.

2954

Vaso-motor Disturbances in the Upper Air Tract. C. W. RICHARDSON. Original contribution to THE LARYNGOSCOPE, p. 848, Aug., 1911.

2956

Case of Foreign Body in the Deeper Air-passages with Spontaneous Expulsion of Same at the End of 15 Months. H. U. RITTER, *Med. Klin.*, Aug. 27, 1911.

The only symptom produced by this piece of bone in the trachea was a severe catarrh. Fifteen months after its introduction, the patient was seized with a severe coughing fit, during which the foreign body was expelled, whereupon the catarrh cleared up.

Ed.

2958

Four Cases of Malignant Tumors Developed on Old Cicatrices of Syphilitic Ulcers. C. M. ROBERTSON, *Arch. internat. de Laryngol. d'Otol. et de Rhinol.*, p. 782, May, 1911.

Two of these cases were cured by operation. It is not unusual for malignant tumors to develop in old cicatricial syphilitic ulcers, and such patients must be watched closely. Ed.

2963

Cycloform, A New Analgesia. A. ROSENBERG, *Rev. hebdomadaire de Laryngol. d'Otol. et de Rhinol.*, p. 374, April 8, 1911.

This new analgesia is recommended as entirely harmless. The fact that it can be easily mixed with other similar remedies adds greatly to its value. Ed.

2970

Blood-vessel Neoplasms in the Upper Air-passages. J. SAFRANEK, *Ztschr. f. Laryngol. Rhinol. u. ihre Grenzgeb.*, Bd. 4, Heft 3, p. 353, 1911.

Male patient, aged 20. On both inferior halves of the tongue dilated veins; on the dorsum of the tongue near its tip the dilated blood vessels formed two cavities the size of a bean. In the middle of the right posterior palatal arch there was a bluish-red tumor the size of a small cherry, containing winding vessels. A similar tumor was situated in the left pyriform sinus.

Safranek also reports a case of pedunculated angioma and one of a cavernous tumor in the larynx. Ed.

2980

Two Cases of Sarcoma of Thymus. W. SHUN, C. A. GRIFFITHS and H. A. SCHOELBERG, *Lancet*, Nov. 4, 1911.

The chief symptom in both these cases was tracheal stenosis. One patient, aged 7 years, was relieved by opening the superior mediastinum. The second patient, aged 18, died soon after coming under observation. A diagnosis of sarcoma was made in each case. The onset of the disease was sudden: Dysnea, dilated vein in neck and thorax, swelling of lower part of the neck and dullness over manubrium. The exact site of the sarcoma was determined by direct laryngoscopy. Ed.

2983

Teaching of Oto-laryngology in Under-graduate and Post-graduate Medical Schools. S. M. SMITH.

Original contribution to THE LARYNGOSCOPE, p. 827, Aug., 1911.

2985

Surgical Management of Acute Abscess of Lymph-nodes in Infancy. T. S. SOUTHWORTH, *Arch. of Ped.*, Sept., 1911.

In acute abscess of the lymph nodes in infancy, the suppuration is usually limited by the line of the distended capsule of the gland. The infection should be rounded up by sacrificing the parenchyma and then the evacuation of the pus left to Nature. Southworth pleads for conservatism. Ed.

2988

New Method of Nebulizing Medicinal Solutions for Inhalations. A. STEFANINI and G. GRADENIGO, *Arch. ital. di Otol. Rinol. e Laringol.*, p. 106, March, 1911.

The authors describe a new type of nebulizer by which minute drops and small particles can be inhaled deep into the respiratory tract. The authors obtained with the water of salcomaggiore at 17° Beaume crystals of 1-6 forming a dry nebula like the smoke of a cigarette. The apparatus is made of glass and hard rubber. It has been demonstrated on animals exposed for a long time to this nebula that the vaporized solution penetrates to the deepest area of the respiratory tract.

LASAGNA.

2990

Preparation and Use of Trombo-kinase. L. W. STRONG.
Original contribution to *THE LARYNGOSCOPE*, p. 81, Feb., 1911.

2991

Report of Three Unusual Cases of Interest to the General Practitioner and Oto-rhinologist. J. A. STUCKY, *Am. Practitioner and News*, Jan., 1911.

The first was a case of chronic ethmoiditis and frontal sinusitis resulting in serious meningitis. The patient was relieved by operation and Dr. Cowley, in commenting on this case, makes the following observations: It is evident that the presence of pus in the maxillary sinus is of no importance as determining the source of the trouble. In the case reported, the trouble was "higher up." It is not necessary to have pain and edema over the frontal sinuses in order to prove the existence of frontal sinus trouble. In this case the pain was oftenest and most severe in the left temple.

The danger of meningitis in these cases is very important and justifies an operation for investigation even when the symptoms are not conclusive. A large per cent of deaths from meningitis, which is so common, is due to sinus disease. When undertaking the operation all the sinuses, including the sphenoid, should be opened and thoroughly drained, for otherwise it is impossible to exclude the probability of their being involved.

The second case reported was one of multiple abscesses of the left frontal lobe of the cerebrum complicated by mastoiditis and otitic meningitis. The otitic meningitis was really only an incident in the case, but could easily have been mistaken for the cause of the cerebral abscess.

The third was a case of mastoiditis, remarkable from the fact that there was extensive destruction of bone and a large epidural abscess in the middle fossa, exposure of the lateral sinus and complete destruction of the mastoid process at the tip, and still the patient was able to pursue his work with comparatively little discomfort.

SCHEPPEGREGEL.

2992

Application of Hydrogen Peroxide in Salve Form. SYLLA, *Deut. med. Wchnschr.*, No. 14, p. 644, 1911.

This salve is recommended in scrofulous rhinitis, for cleansing the naso-pharynx, in ozena, after nasal operations, in the treatment of slight eczemata and furunculosis of the auditory canal, in post-operative aural work, and in aural tuberculosis. The pergenol should not be compounded with water; it may, however, be combined with vaselin. Ed.

2995

Injectons of Blood Serum for Hemorrhage Either Spontaneous or Post-operative. C. F. THEISEN, *Ann. of Otol. Rhinol. and Laryngol.*, p. 595, Sept., 1911.

Hemorrhage in the first case, followed a tonsil operation, but ceased after a second injection of diphtheria antitoxin. Hemorrhage in the second case, a man 40 years of age, occurred an hour or so after free incisions to evacuate serum from an enormously edematous and infiltrated pharynx. The patient was given immediately 10,000 units of antitoxin and the next day 20 cc. of anti-streptococcic serum, there having been diagnosed a streptococcic infection. No further bleeding. Normal horse serum was used in a case of persistent nasal hemorrhage, and diphtheria antitoxin seemed to be of value in a case of hematuria complicating an acute mastoiditis. The author thinks serum of value in hemorrhage.

EDGAR (GOLDSTEIN.)

2998

Chronic Pemphigus of the Mucous Membrane of the Upper Air Passages.

A. THOST, *Arch. f. Laryngol. u. Rhinol.*, Bd. 25, Heft 3, p. 459, 1911.

Three cases are described. The characteristic symptoms are: Exclusive localization on the mucosa without participation of the external skin; habitual participation of the conjunctiva which retracts and causes the bulb to atrophy; constant tendency to proliferation of limited parts of the mucosa and retraction of the deeper mucous membrane, chronic afebrile evolution; a general cachectic state; ineffectiveness of medication (iodid and mercury); and a negative Wassermann. Ed.

3005

Two Cases of Death Due to Hypertrophy of the Thymus in Two Children of Syphilitic Heredity. A. VACHER, *These de Paris*, 1911.

Apropos of sudden death due to hypertrophy of the thymus in two children of a syphilitic heredity, the author raises the question of the probable frequency of hypertrophied thymus in those of syphilitic heredity, and reviews the literature to verify his statement. The author further points out that if, in infants, crises of suffocation are accompanied by croup, stridulous laryngitis, and tracheo-bronchial adenopathy hypertrophied thymus should be suspected, unless the presence of a foreign body can be ascertained. The surgical is the only treatment. Ed.

3006

Persisting Thymus and Mediastinal Adenitis. V. VEAU, *Bull. de la Soc. de Ped.*, Feb., 1911.

In nine cases in which an enlarged thymus was supposed to be the cause of the disturbances in breathing, Veau removed the glands; but in two it was found that the gland itself was small and that an infected gland behind the sternum was the cause of the disorder. Removal of these was followed by complete recovery. The author points out that a subglottic stenosis should not be entirely ascribed to the thymus, but also to mediastinal adenopathy, especially when the difficulty in breathing is more pronounced below the diaphragm. Ed.

3007

Thymectomy; Ten Cases. V. VEAU, *Bull. de la Soc. de Ped.*, March, 1911.

Veau is of the opinion that thymectomy is satisfactory if the patients are robust. He employs it in strong patients, with persisting dyspnea when radioscopy confirms the presence of an enlarged thymus. His success has been varied. One case of congenital stridor was completely relieved by thymectomy, while in another a double operation on the thymus had absolutely no effect. In cases of tuberculous pulmonary lesions, the operation is contra-indicated. Ed.

3015

Report of Over 400 Ear, Nose and Throat Patients Treated at the University Hospital in Manila. H. WINSOR.

Original contribution to *THE LARYNGOSCOPE*, p. 728, June, 1911.

3016

Acute Toxemia; Was Cocain or Adrenalin the Cause? J. D. G. WISHART, *Can. Med. Assn. Jour.*, May, 1911.

The patient, a nurse, in good health, 21 years of age, consulted the author with reference to mouth-breathing and repeated colds in the head.

Removal of tonsils and adenoids and cauterization of the inferior turbinates was found necessary and on December 7 the operation was begun. The parts were anesthetized in the ordinary way, the faucial pillars being injected with a one per cent solution of cocain made up however with fifty per cent adrenalin.

Since the patient showed some sign of faintness she was placed in the prone position. On application of the cautery she was seized with a convulsion, epileptiform in character and lasting fifteen seconds or more. The cauterization was then hastily completed and the adenoids removed. The patient slowly regained consciousness, was heavy and drowsy. At 10 P. M. cyanosis was present, the extremities were cold and the pulse was very irregular. At 4 P. M. the pulse had slowed from 140 to 120. On the second day the pulse was 90, regular and of good volume, but the apex beat was 1 inch to the outer side of the normal point. In the mitral area a systolic murmur, transmitted to the axilla; in the aortic area a systolic murmur; in the pulmonary area a slight reduplication of the second sound, with a normal tricuspid area, were made out. At

the end of ten days the heart was apparently normal in size, the murmurs were still present, there was slight dyspnea on exertion but no edema and the patient was allowed to go home.

Five weeks later she fainted in church. The murmurs are louder than when she left the hospital. Now there is dyspnea on exertion and she has had to postpone her return to work for a further period. The writer gives a comprehensive review of the literature bearing upon this subject and inclined to the belief that while the symptoms correspond in detail with those of cocaine poisoning, adrenalin may have been responsible for the larger share of the damage done. A. A.

3017

Notes on a Trip Abroad. D. J. G. WISHART, *Can. Lancet*, Dec., 1911.

The writer reviews the interesting features of the nose, throat and ear section of the British Medical Association, held in Birmingham in July. He strongly indorses their method of conducting the program and hopes that it may be adopted on this side of the ocean. Under the heads of Place, Program, Exhibitions and Entertainment, he discusses the third International Laryngo-Rhinological Congress, held in Berlin, and lays stress on the recognition given to the Congress by the Government of the country. A. A.

3018

The Actual Cautery in the Treatment of Localized Tuberculous Lesions.

GEO. B. WOOD, *Ann. of Otol., Rhinol. and Laryngol.*, Sept., 1911.

The results of the application of the electric cautery to tuberculous lesions in the pharynx, tonsils and larynx, as well as experiment on three guinea pigs with histologic demonstrations, show that the tubercular process is arrested, not only in the area actually destroyed, but also for some distance in the tissue beyond this area. EDGAR (GOLDSTEIN.)

3019

Diagnosis and Treatment of Tuberculous Lesions in the Upper Respiratory Tract. G. B. WOOD, *Therap. Gaz.*, May, 1911.

Wood divides the treatment of laryngeal tuberculosis into palliative and curative. Positive and permanent cure can only be attained by radical measure. As palliative remedies many drugs have been suggested. Because of the pain associated with the use of lactic acid, he has discarded it; methylene blue he has used but seldom, but the various silver salts have been useful in combatting secondary pyogenic infections and in stimulating the healing process following cauterization or other operative procedures. In cases of advanced laryngeal tuberculosis, when there is no hope of cure, morphin is indicated. Ed.

3023

Treatise on Diseases of the Nose, Throat and Ear. BALLENGER, LEA and FEBIGER, Philadelphia and New York, 1911.

Reviewed in *THE LARYNGOSCOPE*, p. 825, July, 1911.

3025

Functional Test of the Vestibular Apparatus. R. BARANY and K. WITT-MAACK, Gustav Fischer, Jena, 1911.

Reviewed in THE LARYNGOSCOPE, p. 1047, Oct., 1911.

3026

Principles and Practices of Modern Otology. J. F. BARNHILL and E. DE W. WALES, W. S. Saunders Co., Philadelphia, 1911.

Reviewed in THE LARYNGOSCOPE, p. 825, July, 1911.

3030

Atlas of Radiography of the Mastoid Region and the Accessory Sinuses. J. C. BECK, THE LARYNGOSCOPE Co., St. Louis, 1911.

Reviewed in THE LARYNGOSCOPE, p. 1048, Oct., 1911.

3040

Essentials of Laboratory Diagnosis. F. A. FAUGHT, F. A. Davis Co., Philadelphia, 1911.

To be reviewed in a subsequent issue of THE LARYNGOSCOPE.

3041

Hints for the General Practitioner in Rhino-laryngology. J. FEIN, Urban and Schwarzenberg, Berlin and Vienna, 1911.

Reviewed in THE LARYNGOSCOPE, p. 826, July, 1911.

3047

Otology and the General Practitioner. W. HASSLAUER, and L. F. LEHMANN, Munich, 1911.

To be reviewed in a subsequent issue of THE LARYNGOSCOPE.

3048

Laboratory Guide in Bacteriology for the Use of Students, Teachers and Practitioners. P. G. HEINEMANN, University of Chicago Press, 1911.

Reviewed in THE LARYNGOSCOPE, p. 296, March, 1912.

3054

Special Surgery of the Ear and Upper Air Passages. KATZ, PREYSING and BLUMENFELD, Curt Kabitzsch, Wuerzburg, 1911.

Reviewed in THE LARYNGOSCOPE, p. 750, June, and p. 1208, Dec., 1911, and p. 295, March, 1912.

3057

Plastic and Cosmetic Surgery. KOLLE. D. Appleton and Co., New York, 1911.

To be reviewed in a subsequent issue of THE LARYNGOSCOPE.

3060

Manual of Diseases of the Ear, Nose and Throat. J. J. KYLE, P. Blakiston's Son and Co., Philadelphia, 1911.

Reviewed in THE LARYNGOSCOPE, p. 826, July, 1911.

3062

The Deaf Child; a Manual for Teachers and School Doctors. J. K. LOVE, John Wright and Sons, Bristol, 1911.

Reviewed in THE LARYNGOSCOPE, p. 1047, Oct., 1911.

3063

Atlas of Killian's Tracheo-bronchoscopy. Colored Plates Representing Pathological Preparations from Cases Examined During Life by Means of Tracheo-bronchoscopy. MANN, Curt Kabitzsch, Wuerzburg, 1911.

Reviewed in THE LARYNGOSCOPE, p. 295, March, 1912.

3066

Diagnostic and Therapeutic Technic. A. S. MORROW, W. S. Saunders Co., Philadelphia, 1911.

Reviewed in THE LARYNGOSCOPE, p. 826, July, 1911.

3069

Imperial Stereoscopic Anatomy of the Head and Neck; Normal Anatomy of the Temporal Bone and Internal Ear. F. E. NERES, Imperial Publishing Co., New York, 1911.

Reviewed in THE LARYNGOSCOPE, p. 888, Aug., 1911.

3071

The Accessory Sinuses of the Nose in Children—102 Specimens Reproduced in Natural Size from Photographs. A. ONODI, Wm. Wood and Co., New York, 1911.

Reviewed in THE LARYNGOSCOPE, p. 294, March, 1912.

3074

Diseases of the Ear, Nose and Throat, Medical and Surgical. W. C. PHILLIPS, F. A. Davis Co., Philadelphia, 1911.

Reviewed in THE LARYNGOSCOPE, p. 888, Aug., 1911.

3076

Diseases of the Ear, Nose and Throat for the Family Physician and the Undergraduate. H. A. and A. J. REIK, D. Appleton and Co., New York, 1911.

Reviewed in THE LARYNGOSCOPE, p. 890, Aug., 1911.

3083

Developmental Pathology; A Study in Degenerative Evolution. E. S. TALBOT, Richard G. Badger, Boston, 1911.

To be reviewed in a subsequent issue of THE LARYNGOSCOPE.

3085

Diseases of the Nose and Throat. ST. CLAIR THOMSON, D. Appleton and Co., New York, 1911.

Reviewed in THE LARYNGOSCOPE, p. 294, March, 1912.

3086

Stenosis of the Upper Air Passages Following Tracheotomy; Treatment. A. THOST, Lemcke and Buchner, New York, 1911.

Reviewed in THE LARYNGOSCOPE, p. 296, March, 1912.

